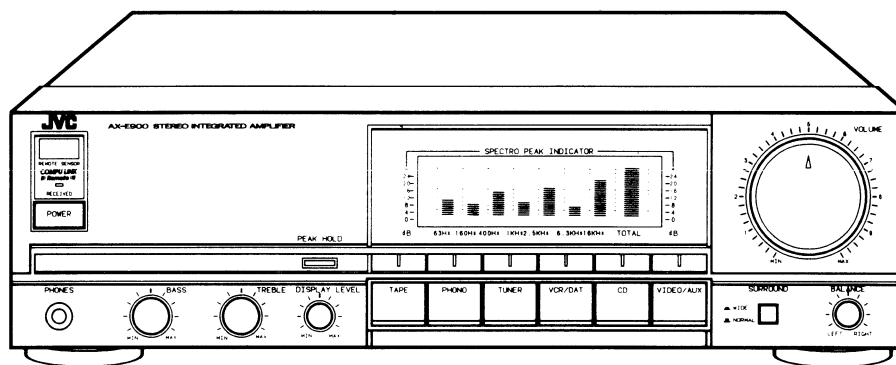


JVC

SERVICE MANUAL

STEREO INTEGRATED AMPLIFIER

MODEL No. **AX-E900BK**



Contents

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Safety Precautions

1. The design of this product contains special hardware and may circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by ($\triangle$) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

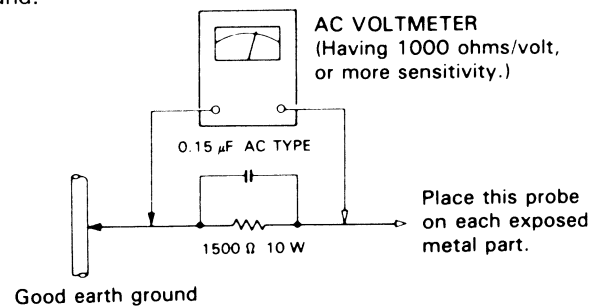
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Specifications

AX-E900BK

OVERALL CHARACTERISTICS

Output power

70 Watts per channel into 8 ohms at 1 kHz (DIN).

65 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.

35 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.08% total harmonic distortion. (measured by JVC Audio Analyzer System)

Power band width : 10 Hz – 30 kHz (IHF, 0.9%, 8 ohms both channels driven)

Frequency response : 5 Hz – 80 kHz +1, –3 dB (8 ohms)

Input terminals

Input sensitivity/impedance (1 kHz)

PHONO : 3.0 mV/47 kohms

CD/AUX/ : 150 mV/47 kohms

TUNER/TAPE

Signal-to-noise ratio

PHONO : 70 dB ('66 IHF)

CD/AUX/ : 98 dB ('66 IHF)

TUNER/TAPE

PHONO : 67 dB (DIN)

CD/AUX/ : 68 dB (DIN)

TUNER/TAPE

Tone controls

TREBLE: +8 ±1 dB
–8 ±1 dB
(at 10 kHz)
BASS: +8 ±1 dB
–8 ±1 dB
(at 100 Hz)

EQUALIZER

PHONO overload

capacity

PHONO : 100 mV (0.02% THD)

PHONO RIAA

deviation

PHONO : ±0.8 dB (20 Hz – 20 kHz)

Recording output

Output level

TAPE REC : 150 mV

GENERAL

Dimensions

: 360 (W) x 103 (H) x
307 (D) mm
(14-3/16" x 4-1/16" x
12-1/8")

Weight

: 5.7 kg (12.6 lbs.)

Design and specifications subject to change without notice.

AX-E700BK

OVERALL CHARACTERISTICS

Output power

50 Watts per channel into 8 ohms at 1 kHz (DIN).

45 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9% total harmonic distortion.

25 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.08% total harmonic distortion. (measured by JVC Audio Analyzer System)

Power band width : 10 Hz – 30 kHz (IHF, 0.9%, 8 ohms both channels driven)

Frequency response : 5 Hz – 80 kHz +1, –3 dB (8 ohms)

Input terminals

Input sensitivity/impedance (1 kHz)

PHONO : 3.0 mV/47 kohms

CD/AUX/ : 150 mV/47 kohms

TUNER/TAPE

Signal-to-noise ratio

PHONO : 70 dB ('66 IHF)

CD/AUX/ : 98 dB ('66 IHF)

TUNER/TAPE

PHONO : 67 dB (DIN)

CD/AUX/ : 68 dB (DIN)

TUNER/TAPE

Tone controls

TREBLE: +8 ±1 dB
–8 ±1 dB
(at 10 kHz)
BASS: +8 ±1 dB
–8 ±1 dB
(at 100 Hz)

EQUALIZER

PHONO overload

capacity

PHONO : 100 mV (0.02% THD)

PHONO RIAA

deviation

PHONO : ±0.8 dB (20 Hz – 20 kHz)

Recording output

Output level

TAPE REC : 150 mV

GENERAL

Dimensions

: 360 (W) x 103 (H) x
307 (D) mm
(14-3/16" x 4-1/16" x
12-1/8")

Weight

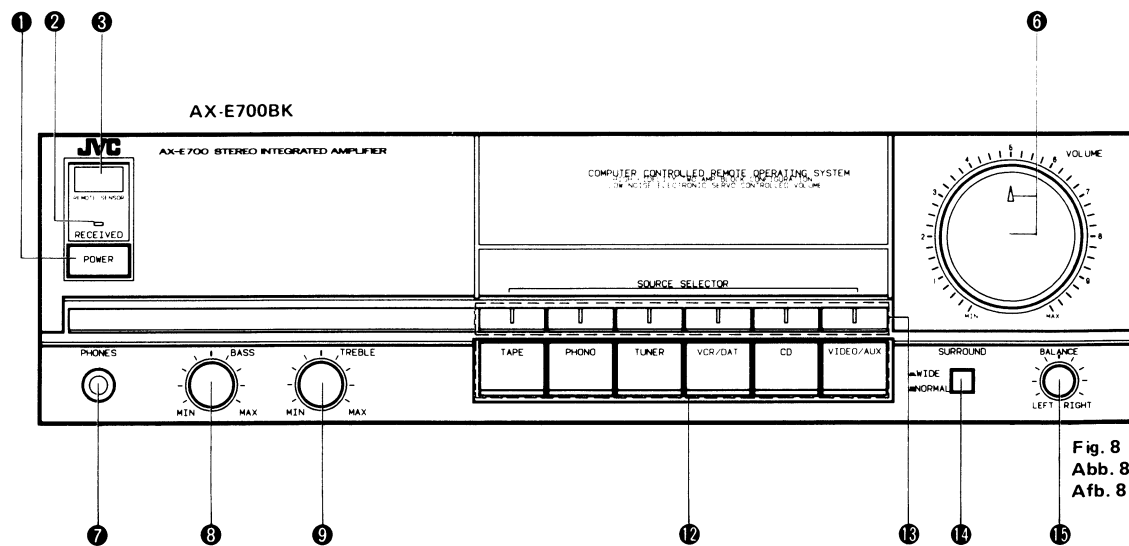
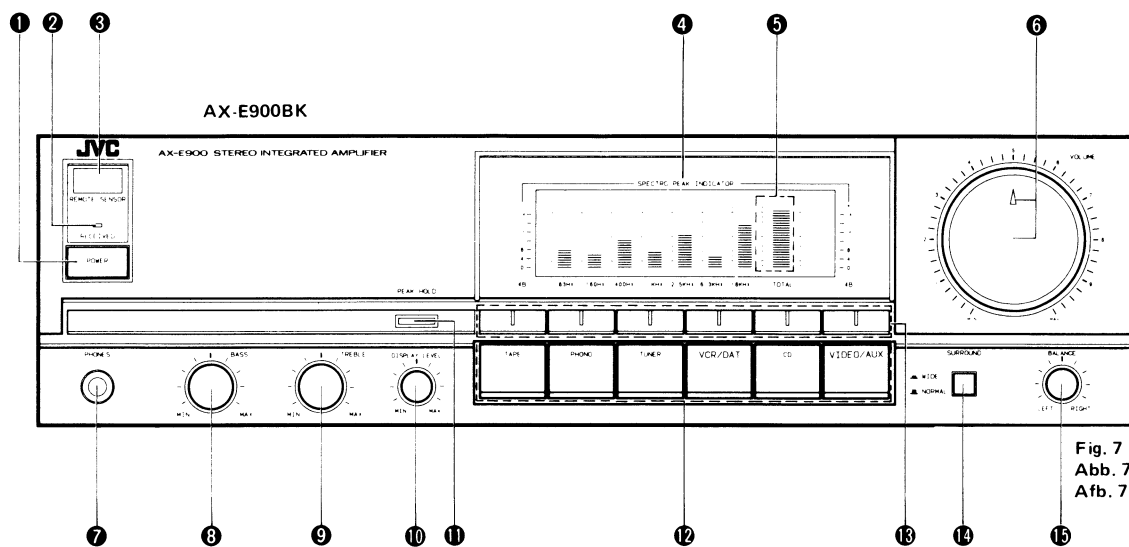
: 5.2 kg (11.5 lbs.)

Design and specifications subject to change without notice.

POWER SPECIFICATIONS

Areas	Line Voltage & Frequency	Power Consumption	
		AX-E900BK	AX-E700BK
U.K.	AC 240 V ~, 50 Hz	394 watt	330 watts
Australia			
Continental Europe	AC 220 V ~, 50 Hz	180 watts	153 watts
Saudi Arabia	AC 127 / 220 V ~ selectable, 50/60 Hz		
Other areas	AC 110 / 120 / 220 / 240 V ~ selectable, 50/60 Hz		

FRONT PANEL



1 POWER

ON (—): Press this button to turn the power on.
OFF (■): Set to this position to turn the power off.

Notes:

- An electronic source selector is used in this unit. When the POWER button is first switched on, two or more sources or no source at all may be selected. Make sure to select correct source by pressing the desired source button.
- If the POWER button is pressed repeatedly on and off too quickly, the same phenomenon as described above will occur.

2 RECEIVED indicator

This indicator lights when information is being received from the remote control unit.

3 REMOTE SENSOR

This window receives signals from the remote control unit. Do not obstruct it.

4 Spectro peak indicator (AX-E900BK only)

The output signal levels are analyzed for 7 frequency bands. The Spectro peak indicator shows the output signal level in each frequency band. For ease of viewing, the indicator is designed so that its response time is faster when rising and slower when decaying.

5 TOTAL Spectro Peak indicator (AX-E900BK only)

This indicator indicates the output signal level.

6 VOLUME and INDICATOR

Controls the volume of the speakers and headphones. This indicator lights when the POWER button is pressed on.

7 PHONES (headphone jack)

Plug stereo headphones into this jack for private listening.

8 BASS

Turn clockwise to boost bass response and counterclockwise to decrease it.

9 TREBLE

Turn clockwise to boost treble response and counterclockwise to decrease it.

10 DISPLAY LEVEL (AX-E900BK only)

Adjust the relative display position on the Spectro peak indicator so that especially weak or strong level signals can be displayed in an easy-to-see position. This volume has no effect on the output sound level.

11 PEAK HOLD (AX-E900BK only)

This button is pressed to enable the holding of the peak values of each of the Spectro peak indicator for about 3 seconds.

12 SOURCE SELECTOR

TAPE: Press to listen to a cassette deck connected to the TAPE terminals.

PHONO: Press to listen to a turntable connected to the PHONO terminals.

TUNER: Press this button to listen to a radio broadcast.

VCR/DAT: Press this button to listen to the sound of the VCR or DAT deck connected to the VCR/DAT terminals.

CD: Press this button to listen to a compact disc player connected to the CD terminals.

VIDEO/AUX: Press this button to listen to the sound of the VIDEO DISC etc. connected to the VIDEO/AUX terminals.

13 SOURCE indicator

The indicator light corresponding to the pressed source selector button.

14 SURROUND

Press this button to WIDE (—) with a stereo signal for an expanded sound field. Usually set this switch to NORMAL (■).

Notes:

- When a 4 channel surround music is played with surround speaker connected, switch over the speaker connection switch of the rear panel to (**A+B**) side before hand.
- However, when the audio source is monaural, no surround effect will be obtained.
- Sound from the surround speakers cannot be recorded on the tape.

15 BALANCE

Use to adjust the balance between the left and right speakers.

This knob is normally set to the center click position.

OPERATION

Before use

Connect each component correctly, then plug the power cord to the AC wall outlet.

Basic operation

1. Press the POWER button on.
2. Proceed through the steps described below.
3. Adjust the volume and balance for the desired sound levels.
4. Use the BASS and TREBLE volumes to obtain the tone you wish to hear.
5. When the SEA graphic equalizer is connected to the unit, use it to adjust the tone quality.

Listening to broadcasts

1. Press the TUNER button so that the TUNER indicator lights.
2. Operate the Tuner as described in its Operation Manual.

Listening to records

1. Press the PHONO button. The PHONO indicator will light.
2. Operate the turntable as described in its operation manual.

Notes:

- Use a turntable with an MM cartridge.
- If your turntable has a separate ground lead, connect it to the GND terminal.

Listening to compact discs

1. Press the CD button. The CD indicator will light.
2. Operate the CD player as described in its operation manual.

Listening to tapes

1. Press the TAPE button so that the TAPE indicator lights.
2. Operate the cassette deck for playback as described in its operation manual.

Listening to DAT

1. Press the VCR/DAT button so that the VCR/DAT indicator lights.
2. Operate the DAT deck as described in its operation manual.

Listening to VIDEO DISC etc.

1. Press the VIDEO/AUX button so that the VIDEO/AUX indicator lights.
2. Operate the video disc player etc. as described in its operation manual.

Listening to a VCR

1. Press the VCR/DAT button so that the VCR/DAT indicator lights.
2. Operate the VCR for playback as described in its operation manual.

Recording tapes**— Recording from records —**

1. Press the PHONO button so that the PHONO indicator lights.
2. Operate the turntable.
3. Operate the cassette deck for recording.

Note:

- The sound you hear from the speakers or headphones is the source sound, not the recording on the tape.

— Recording from other sources (CD, TUNER, VCR, VIDEO DISC, etc.) —

Press the button corresponding to the source to be recorded. All other operations are identical to those when recording from records.

Using stereo headphones

Stereo headphones can be plugged into the front panel jack. The signal from this jack is independent of the speakers.

Plug stereo headphones into this jack for private listening.

REMOTE CONTROL UNIT (RM-SE900)

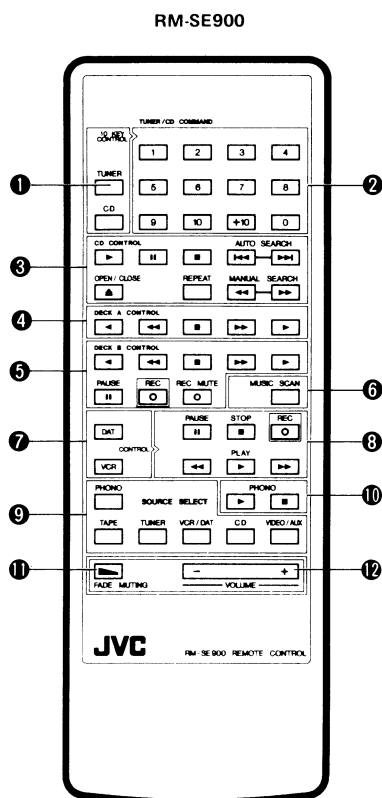


Fig. 12

1 10 KEY CONTROL

TUNER (1): Press this button to use the 10 key (2) as a tuner 10 key operation button.

CD (1): Press this button to use the 10 key (2) as a CD 10 key operation button.

2 10 KEY (1 ~ 10, 0, +10)

These buttons are for directly accessing the FM/AM preset stations, and for selecting the CD track No. Use this button to assign the CH numbers or track numbers (1 ~ 10) of a disc which is to be played or programmed. To assign, a track number greater than 10, use a combination of the +10 button and numeric button.

Examples:

5: Press numeric button [5].

10: Press numeric button [10].

17: Press the +10 button once and numeric button [7].

20: Press the +10 button once and numeric button [10]. Or press the [0] button after pressing the +10 button twice.

25: Press the +10 button twice and numeric button [5].

3 CD CONTROL

Play (▶): Press this button to play a compact disc.

Pause (⏸): Press this button to temporarily stop play. To start play again, press the Play (▶) button.

Stop (■): Press this button to stop play. The standby mode will be entered.

AUTO SEARCH (◀◀) (backward):

Press once during play to return the unit to the start of the current tune. Press twice to return the unit to the start of the previous tune. Each time this button is pressed, the unit moves backward by one selection. Keeping this button continuously pressed will return the unit to the beginning of the disc. Pressing this button to return to the beginning of the disc.

AUTO SEARCH (▶▶) (forward): Press once during play to move the unit to the start of the next tune. Each time this button is pressed, the unit moves forward by one tune.

OPEN/CLOSE (⏏): Press this button to open or close the disc tray. Pressing this button during play stops play and the disc tray slides out.

REPEAT: Press this button to play the CD repeatedly.

MANUAL SEARCH (◀◀) (backward): Press to search for the desired selection in the reverse direction.

MANUAL SEARCH (▶▶) (forward): Press to search for the desired selection in the forward direction. Sound will be heard at a reduced level while search is taking place from the play mode.

4 DECK A CONTROL

(◀◀): Press to quickly wind the tape from the right to the left reel.

(⏸): Press to stop the tape.

(▶▶): Press to quickly wind the tape from the left to the right reel.

(▶): Press to play the tape in the forward direction.

(◀): Press to play the reverse direction of the tape.

5 DECK B CONTROL

For (◀◀), (⏸), (▶▶), (◀), and (▶), the operation is the same as that for DECK A.

PAUSE (⏸): Press to temporarily stop the play or recording modes. To restart, press the play button.

REC (⏻): To record, press the PLAY (▶) button while holding down this button.

REC MUTE (⏻): Press this button to create a non-recorded section between songs.

6 MUSIC SCAN ()

Press this button together with the (▶▶) or (◀◀) of tape deck A or B to briefly play the beginning of each selection.

7 CONTROL

VCR (VCR): Press this button to operate a VCR which is connected to the VCR/DAT terminals.

DAT (DAT): Press this button to operate a DAT deck which is connected to the VCR/DAT terminals.

Note:

• Connect the remote cable of the digital audio tape deck to the COMPU LINK-1/ SYNCHRO terminal of this unit.

8 VCR/DAT CONTROL (VCR or DAT)

PAUSE (⏸): Press this button to pause during playback or recording. To cancel PAUSE, press the PLAY button.

STOP (■): Press this button to stop operation.

REC (⏻): To record, press the PLAY (▶) button while holding down this button.

(◀◀): DAT DECK: Press this button to quickly wind the tape from the right to left reel.

VCR: From the stop mode, press this button to rewind tape. From the playback mode press this button for to view high speed reverse play. (Shuttle search.)

PLAY (▶): Press this button to play a tape.

(▶▶): DAT DECK: Press this button to quickly wind the tape from the left to right reel.

VCR: From the stop mode, press this button to take VCR to the fast forward mode. From the playback mode, press this button to view high speed forward play. (Shuttle search.)

9 SOURCE SELECT

This function is similar to the 12 SOURCE SELECTOR at page 17. For components with COMPU LINK, the selected unit will start playing while the previously selected unit stops playing.

For components without the COMPU LINK feature, such as a VCR or a video disc player, only the source selector changes in response to the button pressed.

10 PHONO

(▶): Press this button to start playing a record on the turntable.

(■): Press this button to stop playing a record.

11 FADE MUTING ()

Pressing this button to lower the volume in steps. The volume continues to decrease each time this button is pressed.

12 VOLUME (- +)

Press the + button to increase the volume and the - button to decrease it. When these buttons are pressed, the VOLUME knob on the amplifier rotates to register the new volume level and during rotating the knob's indicator blinks.

HOW TO USE THE REMOTE CONTROL UNIT (RM-SE900)

- The "COMPU LINK" component system is composed of the following: Tuner, CD player, Cassette deck, Record player and DAT deck. All interconnect to the COMPU LINK-1/SYNCHRO terminals.
- Each "COMPU LINK" component can be put into operation by merely operating the appropriate button on the remote control unit. It is not necessary to press the source selector button on the amplifier.

Example:

While a CD is playing you press the tape play button. The CD will stop playing and the tape playback will start.

Note:

- If the component already in playback happens to be a device without the "COMPU LINK" feature, it will keep on playing. To stop a COMPU LINK device (which may be a VCR) press its STOP button.
- The remote control unit works best when it is aimed straight at the remote sensor of the amplifier. (The control unit is model RM-SE900 and the amplifier is model AX-E900BK or AX-E700BK.) If the signal sent by the remote control unit is received by two or more components, the components may hesitate to start up. If this should occur keep pressing the button until all of the target components start. If the target components are far apart, they may not be able to receive the remote control signals simultaneously, therefore some of them may remain inactive. In such a case, re-aim the control unit to the remote sensor of each inactive component and press the appropriate button. (RM-SE900)
- The remote control unit has no memory capability. Thus, memory programming, if desired, must be done at the component level, which can be either Tuner, CD player or DAT player.

To listen to AM or FM radio broadcasts (Fig. 13)

- 10 KEY CONTROL** (1) **TUNER**: Pressing this button sets these buttons in FM or AM mode, 10 KEY: (1 ~ 10, +10, 0.)

Note:

- The amplifier source selector automatically switches over to "TUNER".
- (2) 1 ~ 10, +10, 0: Of the preset channels, programmed in the tuner, check the number of the channel of your choice, and press the button corresponding to that channel number.

Examples:

Channels 1 ~ 10:

For Channel 5, press numeric button 5.

For Channel 10, press numeric button 10.

Channel 17: Press +10 button once and then numeric button 7.

Channel 20: Press +10 button once and then numeric button 10. Or press the 0 button after pressing the +10 button twice. Channel 25: Press +10 button twice and then numeric button 5.

• FM/AM broadcast

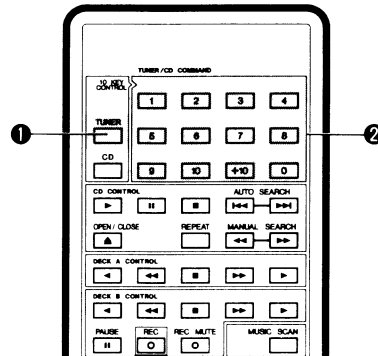


Fig. 13

To play CD (Fig. 14)

10 KEY CONTROL (1) **CD**: To select a track by number on the CD, press the CD button first, then press the 10 KEY (1 ~ 10, +10, 0) (2) buttons for the desired selection.

- 3 CD CONTROL** (▶▶): Press this button to start play.
- 3** (■): Press this button to stop play.
- AUTO SEARCH** (3) (◀◀): Pressing this button interrupts the selection being played and returns to the beginning of that selection.
- AUTO SEARCH** (3) (▶▶): Pressing this button interrupts the play and brings the CD to the start of the next selection.
- MANUAL SEARCH** (3) (◀◀): Press this button for fast reverse of the CD during play or pause modes.
- MANUAL SEARCH** (3) (▶▶): Press this button to fast forward the CD during play or pause modes.
- REPEAT** (3) (□): Press this button to repeat the play of the whole disc or of the selected tune.
- OPEN/CLOSE** (3) (▲): Press this button to load or unload the disc platter.

• CD player

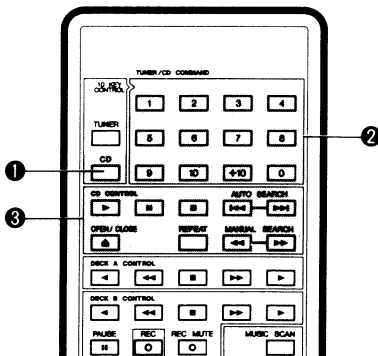


Fig. 14

To play cassette deck

DECK A CONTROL (Fig. 15)

- 4** (◀): Press to play the reverse direction of the tape.
- 4** (◀◀): Press to quickly wind the tape from the right to the left reel.
- 4** (■): Press to stop the tape.
- 4** (▶): Press to play the tape in the forward direction.
- 4** (▶▶): Press to quickly wind the tape from the left to the right reel.

DECK B CONTROL (Fig. 15)

- 4** (◀), (◀◀), (■), (▶▶), (▶): The functions of these buttons are the same as those of DECK A.
- 4** (||): Press this button to pause tape running. Press this button simultaneously with the REC (○) button to allow the deck to enter the recording wait status. Press the (◀) or (▶) button to cancel pause and to start recording.
- REC** (5) (○): Press either the (◀) or (▶) button while pressing this button to start recording.
- REC MUTE** (5) (○): Press this button to omit unwanted recording during the recording mode or to insert a blank space between programs.

MUSIC SCAN

- 6** (□): Press either the (◀◀) or (▶▶) button of DECK A or DECK B simultaneously with this button to find the start of a program.

Note:

- For details, see the "instruction of cassette deck".

• Cassette deck

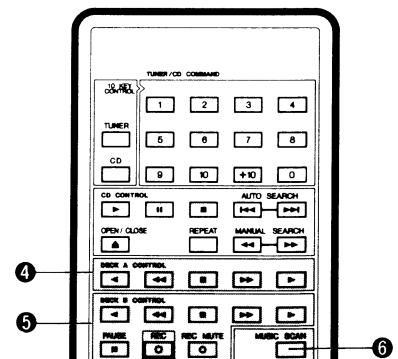


Fig. 15

To play DAT or VCR (Fig. 16)

1. Press the **7** **[DAT]** button to control the DAT deck or the **7** **[VCR]** button to control the VCR.

Note:

- Point the front end of the Remote Control Unit directly at the remote sensor of the VCR when operating the VCR.

DAT (Fig. 16)

1. **CONTROL 8 [DAT]** : Pressing **[DAT]** button makes the control buttons **8** control the DAT deck.
2. **PLAY 8 [▶]** : Press this button for DAT playback.
3. **STOP 8 [■]** : Press this button to stop the DAT deck.
4. **PAUSE 8 [⏸]** : Press this button pauses the DAT deck when it is the play back mode.
PLAY 8 [▶] : Pressing this button resumes the recording operation that was interrupted by pause.
5. **8 [◀▶]** : Press this button to set the tape to rapid wind into the left cassette reel.
8 [▶▶] : Press this button to set the tape to rapid wind into the right cassette reel.
REC 8 [⏻] + PLAY [▶] : Pressing **[▶]** button while keeping **[⏻]** button pressed commences recording.
REC 8 [⏻] + PAUSE [⏸] : Pressing these buttons, **[⏻]** and **[⏸]**, at the same time pauses the recording operation.
(Recording can be resumed at anytime.)

VCR (Fig. 16)

1. **CONTROL 7 [VCR]** : Pressing this button makes the control button **8** control the VCR.
2. **PLAY 8 [▶]** : Pressing this button puts the VCR into playback.
3. **STOP 8 [■]** : For stopping the VCR.
4. **PAUSE 8 [⏸]** : Pressing this button while the VCR is in playback switches its mode to STILL.
PLAY 8 [▶] : To cancel PAUSE, press PLAY button.
5. **8 [◀▶]** : Press this button to rewind the tape.
8 [▶▶] : Press this button to set the tape in rapid forward motion. When the tape is in the PLAY mode, these two buttons can be used for selecting the "SHUTTLE SEARCH".
REC 8 [⏻] + PLAY [▶] : To start recording, press **[▶]** button while keeping **[⏻]** button pressed.
REC 8 [⏻] + PAUSE [⏸] : Pressing these buttons, **[⏻]** and **[⏸]**, at the same time pauses the recording operation.
(Recording can be resumed at anytime by pressing PLAY **[▶]** button.)

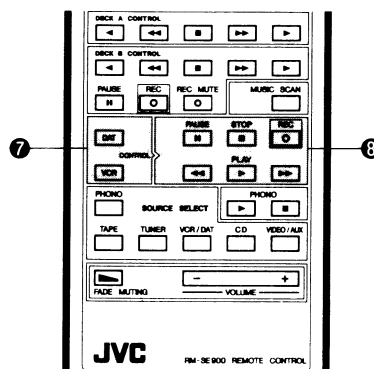
• CONTROL DAT or VCR

Fig. 16

SOURCE SELECT (Fig. 17)

The source changes automatically in response to the pressed buttons. When the source is switched to the component which have COMPU LINK, the unit starts playing automatically.

To play a record

1. **10 [▶]** : Press this button to play a record.
2. **10 [■]** : Press this button to stop playing a record.

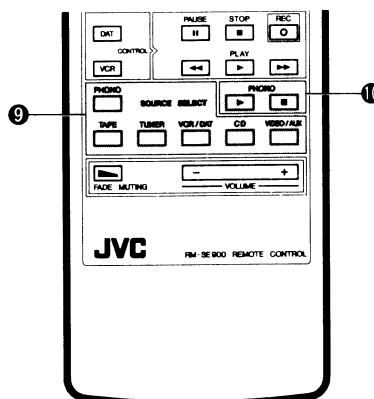
• SOURCE SELECT and PHONO

Fig. 17

Mute the sound (Fig. 18)

FADE MUTING 11 [◻] : Press this button to lower the volume in steps. The volume continues to decrease each time this button is pressed.

Move volume up or down (Fig. 18)

VOLUME 12 [◀▶] : The sound volume is increased or decreased gradually.

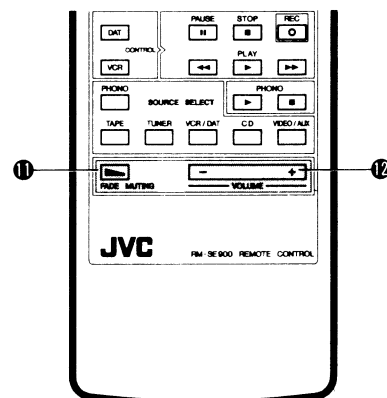
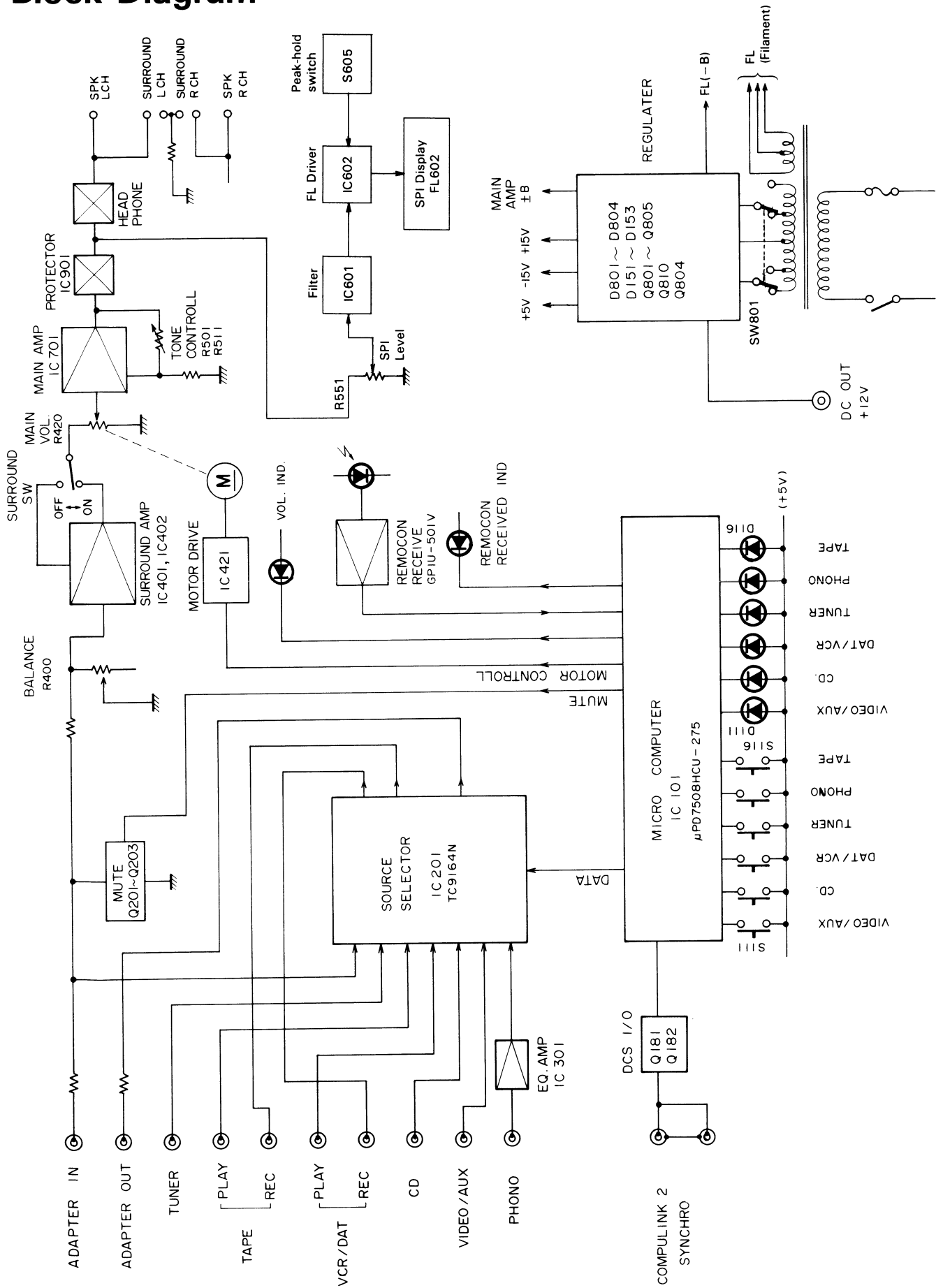


Fig. 18

Block Diagram



Removal Procedures

(1) Removing the Top Cover

1. Remove six screws, four of them are on both sides of the top cover and two are on the rear panel.
2. Raise the rear section of the top cover slightly and remove the lugs of the front section.

(2) Removing the Front Panel

1. Remove the top cover. (Refer to above item.)
2. Remove five screws ① through ⑤ securing the front panel and three screws ⑥ through ⑧ securing from the bottom plate. (See fig.1.)

(3) Removing the Main Volume

1. Remove the front panel. (Refer to above item.)
2. Pull out the slender wire connector (J101) from the main volume.
3. Turn the front panel over the arrow direction. (See fig.2.)
4. Pull out the main volume knob and LED holder.
5. Remove the nut securing the main volume.
6. Remove two screws ⑨ and ⑩ securing the volume holder. (See fig.2.)

(4) Removing the Front PCB

1. Remove the front panel. (Refer to above item.)
2. Remove the plastic rivets securing the pc boards.
3. Remove the catches retaining the pc boards backside the front panel.

(5) Removing the Bottom Plate

1. Remove twenty screws on the bottom surface.

(6) Removing the Power Pack

1. Remove the bottom plate. (Refer to above item.)
2. Remove two screws ⑪ and ⑫ securing the heat-sink and leaf spring. (See fig.3.)
3. Resolder the pins of the power pack.

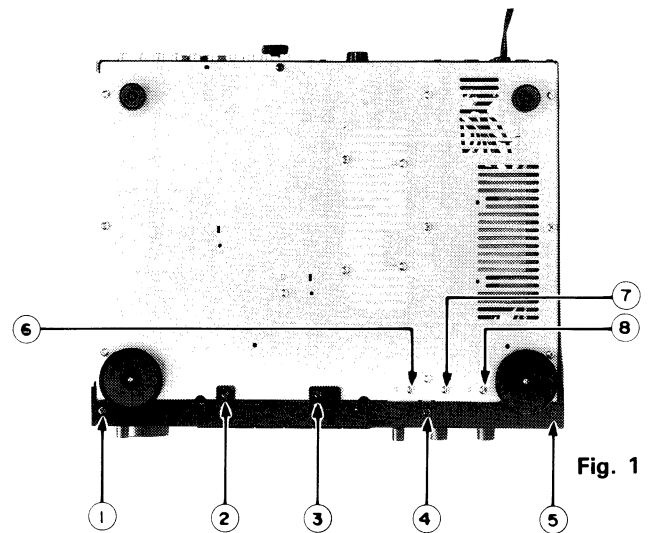


Fig. 1

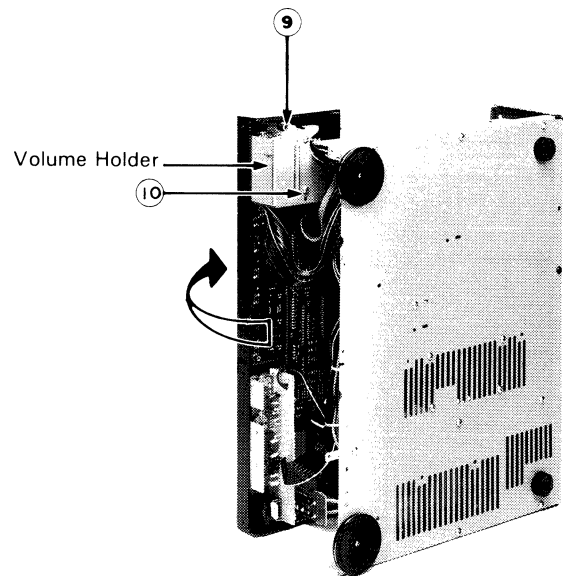


Fig. 2

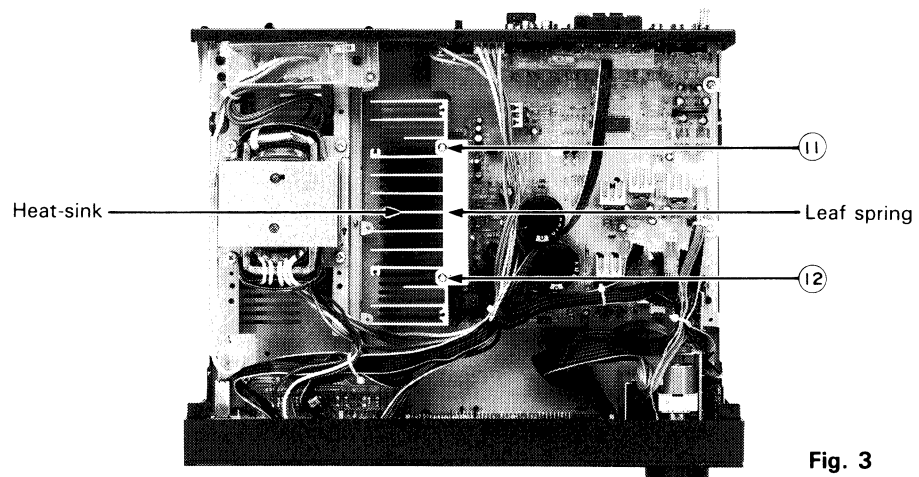
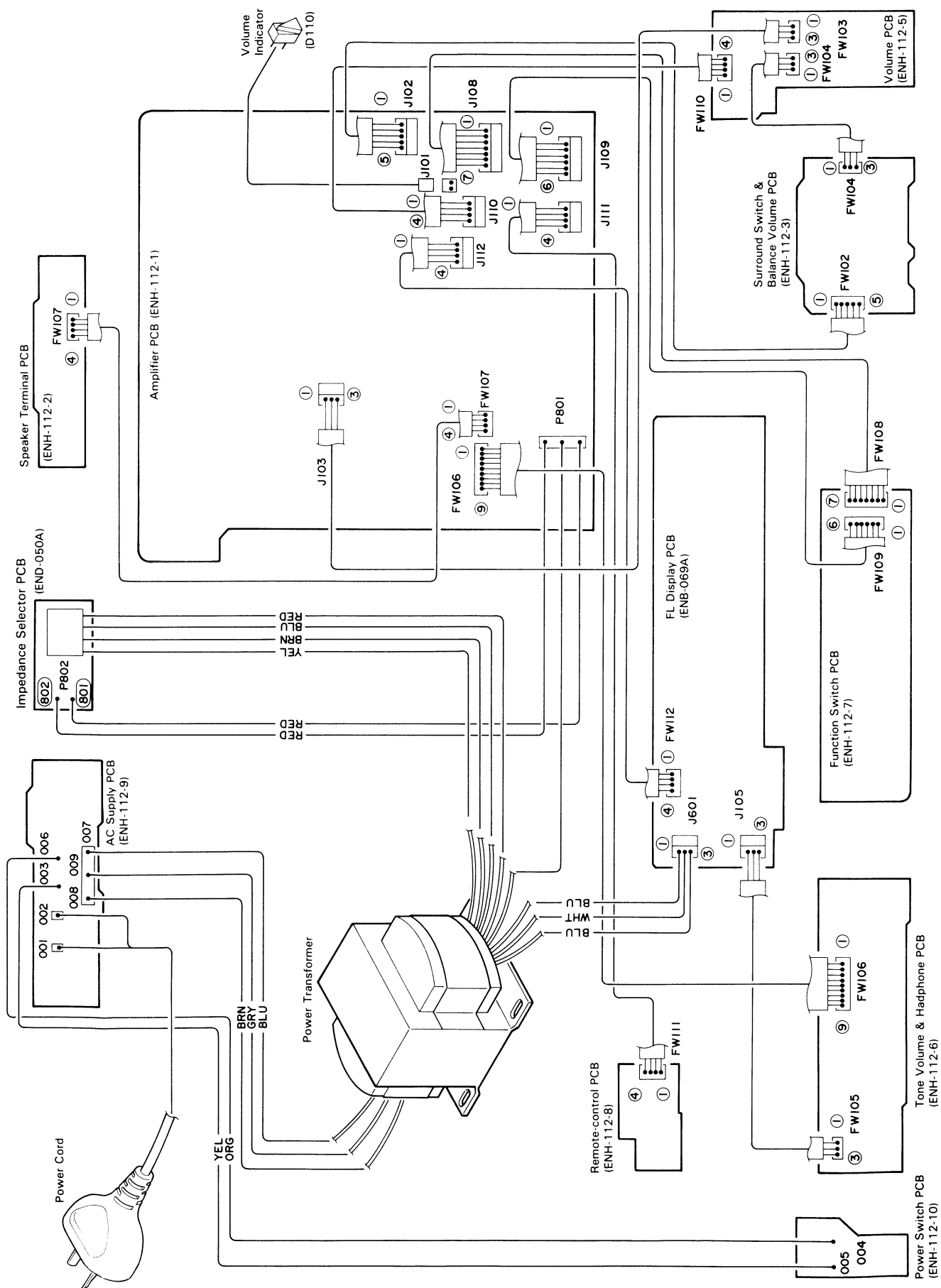


Fig. 3

Connection Diagram



PARTS LIST

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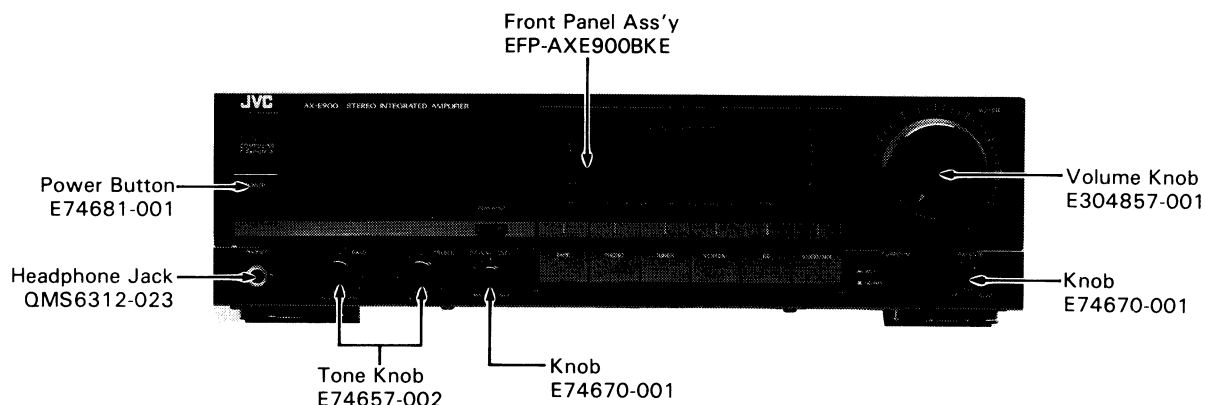
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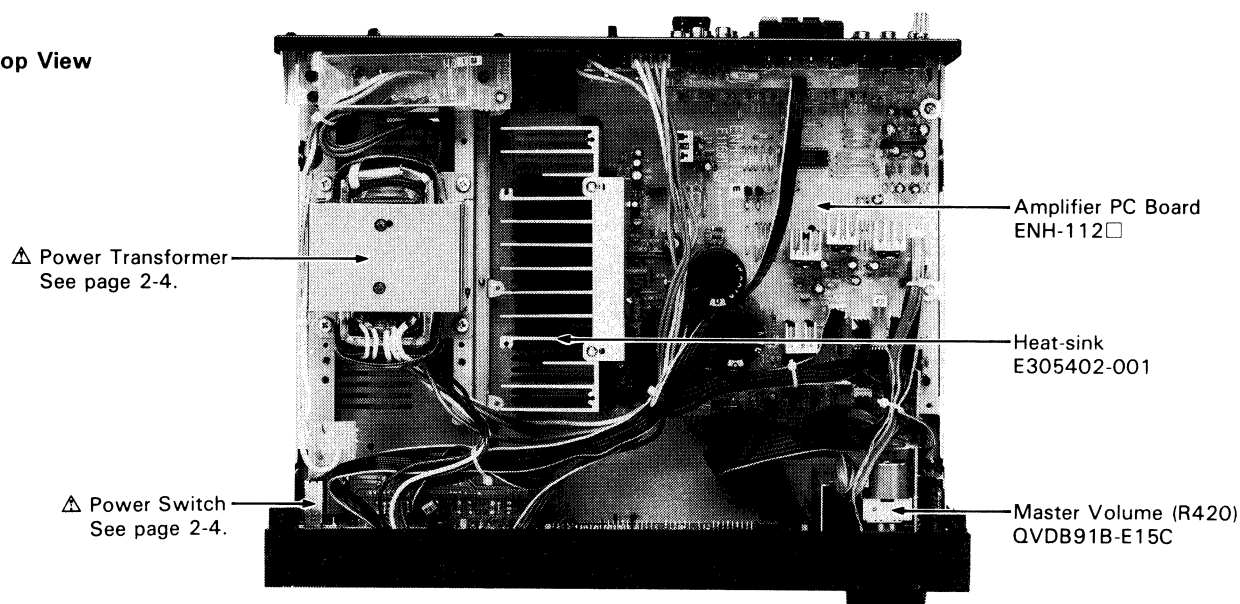
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Main Parts Locations

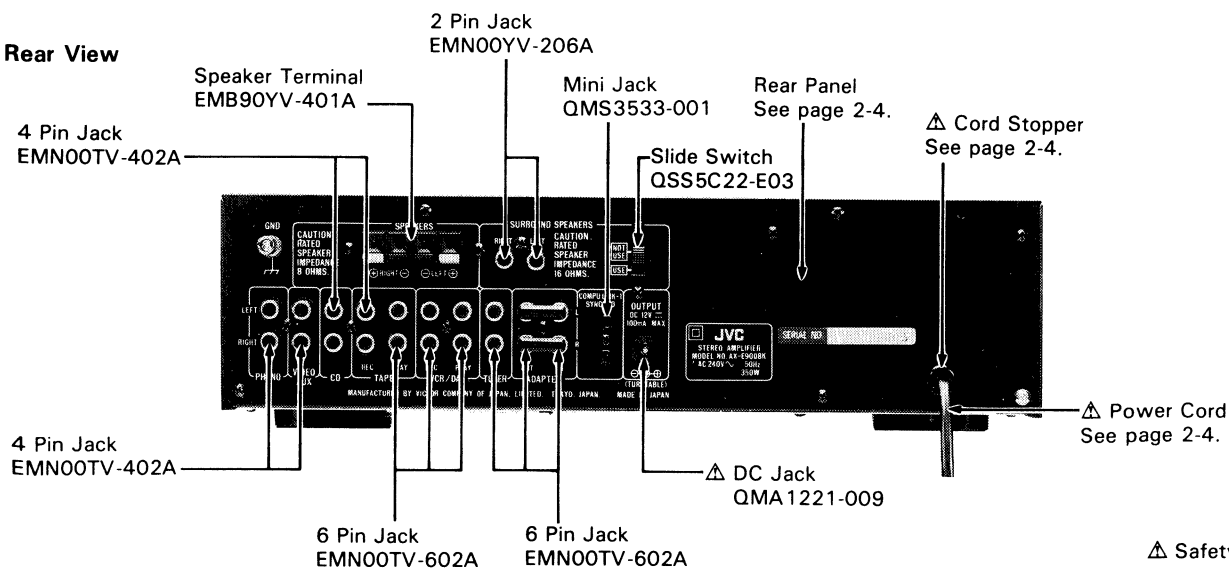
■ Front View



■ Top View

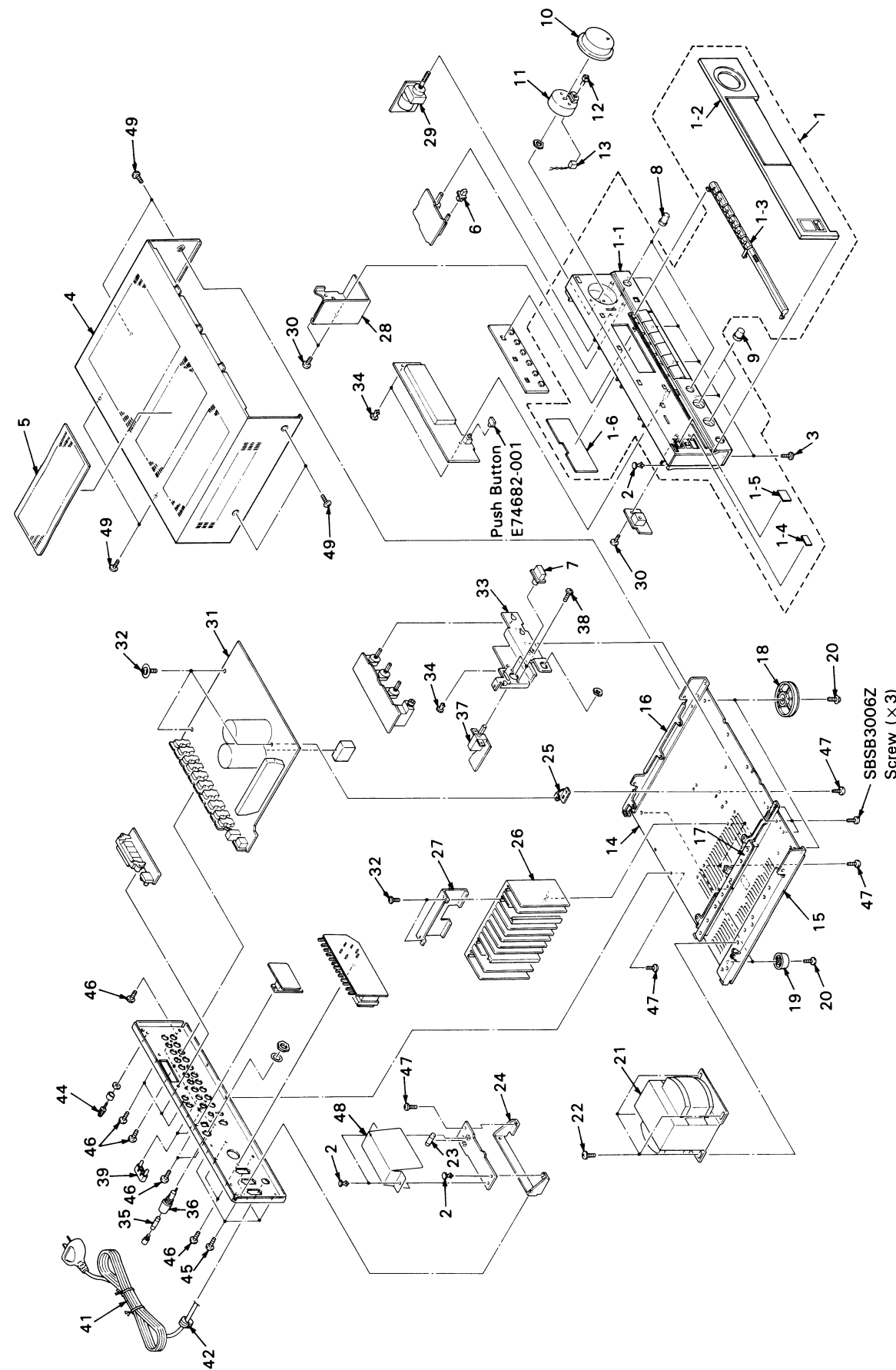


■ Rear View



△ Safety Parts

Exploded View and Parts List



Exploded View and Parts List

Item	Parts Number	Parts Name	Q'ty	Description	Areas
1	EFP-AXE900BKE	Front Panel Ass'y	1		
1-1	E11727-002	Front Panel	1		
1-2	E25709-004	Amp. Window	1		
1-3	E305364-001	Fitting	1		
1-4	E72437-006	Sheet	1		
1-5	E72436-007	Screen	1		
1-6	E74735-001	FL Screen	1		
2	E48729-008	Plastic Rivet	4		
3	SDSB3008M	Screw	5		
4	E25999-002	Metal Cover	1		E, BS
5	E304239-001	Protect Sheet	1		
6	E74180-002	Push Button	1		
7	E74681-001	Push Button	1	POWER	
8	E74670-001	Knob	2		
9	E74657-002	Tone Knob	2		
10	E304857-001	Volume Knob	1	Main Volume	
11	E304320-003	Holder	1		
12	SLT-25VR52F	LED	1		
13	EWS142-008H	Socket Wire	1		
14	E25703-005	Bottom Plate	1		
15	E304848-003	Side Bracket	1	Left	
16	E304850-001	Side Bracket	1	Right	
17	E304849-005	Center Bracket	1		
18	E74185-001	Foot Ass'y	2	Front	
19	E47227-020	Foot Ass'y	2	Rear	
20	SBST3008Z	Screw	4		
21	ETP1150-28EA	Power Transformer	1		E, A, G
22	ETP1150-28EABS	Power Transformer	1		BS
23	ETP1150-28FA	Power Transformer	1		P, PG, U
24	E65389-004	Special Screw	4		
25	QMF51E2-1R6SBS	Fuse	1	T1.6A / 250V	BS
26	QMF51A2-1R6S	Fuse	1	T1.6A / 250V	E, A, G
27	E71074-002	Fuse Bracket	1		E, A, G, BS
28	E68587-008	Bracket	1		
29	E305402-001	Heat-sink	1		
30	E305367-003	Leaf Spring	1		
31	E304862-002	Volume Bracket	1		
32	QVDB91B-E15C	Main Volume	1	R420	
33	SBSP3008Z	Screw	3		
34	-----	Main PC Board	1	(ENH-112□)	
35	E73265-001	Special Screw	5		
36	E305363-001	Volume Bracket	1		
37	E48729-007	Plastic Rivet	3		
38	QMF51A2-3R15S	Fuse	1	T3.15A / 250V	P
39	QMF51A2-1R6S	Fuse	1	T1.6A / 250V	PG, U
40	QMC0301-003	Fuse Holder	1		P, PG, U
41	QSP1106-004BS	Power Switch	1		BS
42	QSP1106-004	Power Switch	1		except BS
43	SBST3006Z	Screw	2		
44	EMZ3001-002	Short Pin	2		
45	QSR0085-008U	Voltage Selector	1		P, PG, U
46	QMP3900-200	Power Cord	1		E, G
47	QMP2560-244	Power Cord	1		A
48	QMP9017-008BS	Power Cord	1		BS
49	QMP7600-200	Power Cord	1		P, PG, U
50	QHS3876-162BS	Cord Stopper	1		BS
51	QHS3876-162	Cord Stopper	1		except BS
52	E26000-012	Rear Panel	1		E, G
53	E26000-011	Rear Panel	1		A, BS
54	E26000-010	Rear Panel	1		P, PG, U
55	E70078-001	GND Terminal	1		
56	SDSB3008M	Screw	2		P, PG, U
57	E73273-001	Special Screw	17		
58	SDSB3008N	Screw	16		
59	E72922-002	Cover	1		E, A, G, BS
60	SDSE3008M	Screw	6		

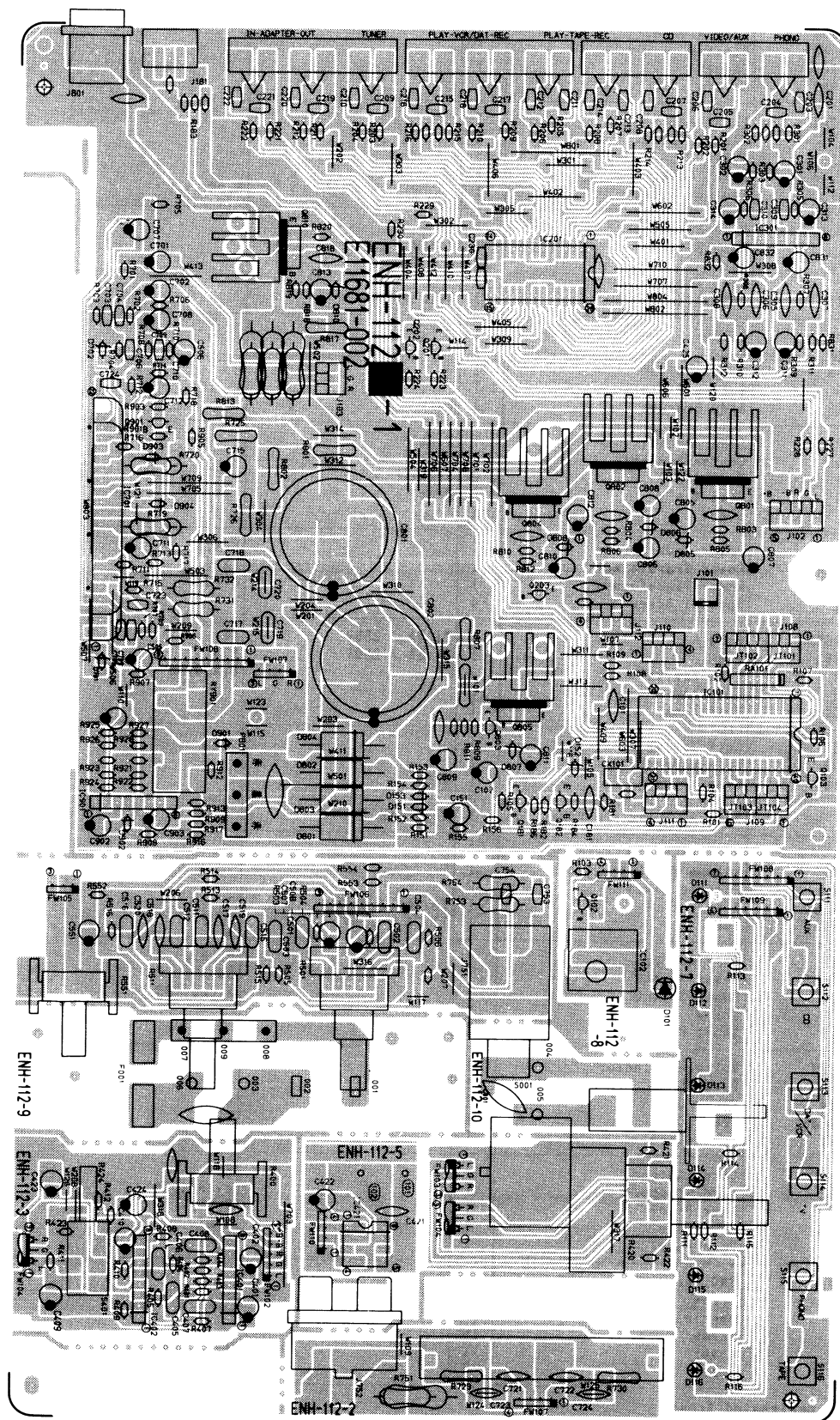
Note: The Marks for Designated Areas
E Europe BS the U.K.
A Australia P, PG U.S.Military Market
G West Germany U Other Countries

△:Safety Parts
No Mark indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENH-112□ Amplifier PC Board Ass'y

Note: ENH-112□ Varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENH-112 B	Europe
ENH-112 C BS	U.K.
ENH-112 D	West Germany
ENH-112 E	Australia
ENH-112 A	U.S. Military Market & Other Countries

TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
Q102	DTA144ES	SILICON	ROHM
Q103	2SA564A(Q,R)	SILICON	MATSUSHITA
Q181	2SC1685(R,S)	SILICON	MATSUSHITA
Q182	2SC1685(R,S)	SILICON	MATSUSHITA
Q201	2SD1302(S,T)	SILICON	MATSUSHITA
Q202	2SD1302(S,T)	SILICON	MATSUSHITA
Q203	DTA144ES	SILICON	ROHM
Q801	2SD1266(P,Q)	SILICON	MATSUSHITA
Q802	2SB941A(P,Q)	SILICON	MATSUSHITA
Q803	2SC1740(R,S)	SILICON	ROHM
Q804	2SB941A(P,Q)	SILICON	MATSUSHITA
Q805	2SD1266(P,Q)	SILICON	MATSUSHITA
Q810	2SD1266(P,Q)	SILICON	MATSUSHITA
Q901	2SC1740(R,S)	SILICON	ROHM

I. C. S

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
IC101	UPD7508HCU-275	I.C.	NEC
IC102	GP1U501V	I.C.	SHARP
IC201	TC9164N	I.C.	TOSHIBA
IC301	M5218L-R	I.C.	MITSUBISHI
IC401	M5218L	I.C.	MITSUBISHI
IC402	M5218L	I.C.	MITSUBISHI
IC421	LB1639	I.C.	SANYO
IC701	STK4196MK10V	I.C.	SANYO
IC901	UPC1237HA	I.C.	NEC

DIODES

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
D101	SLH-34VC50F124	L.E.D.	ROHM
D111	SLH-34DC3F	L.E.D.	ROHM
D112	SLH-34DC3F	L.E.D.	ROHM
D113	SLH-34DC3F	L.E.D.	ROHM
D114	SLH-34DC3F	L.E.D.	ROHM
D115	SLH-34DC3F	L.E.D.	ROHM
D116	SLH-34DC3F	L.E.D.	ROHM
D151	1SS133	SILICON	ROHM
D152	MTZ4.7JB	ZENER	ROHM
D153	1SS133	SILICON	ROHM
D701	MTZ6.2JC	ZENER	ROHM
D702	MTZ6.2JC	ZENER	ROHM
D801	30DL2FC	SILICON	NIHONINTER
D802	30DL2FC	SILICON	NIHONINTER
D803	30DL2FC	SILICON	NIHONINTER
D804	30DL2FC	SILICON	NIHONINTER
D805	MTZ15JC	ZENER	ROHM
D806	MTZ15JC	ZENER	ROHM
D807	MTZ6.2JC	ZENER	ROHM
D808	MTZ33JC	ZENER	ROHM
D810	MTZ12JC	ZENER	ROHM
D901	MTZ24JC	ZENER	ROHM
D902	1SS133	SILICON	ROHM
D903	1SS133	SILICON	ROHM
D904	1SS133	SILICON	ROHM

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C001	QCZ9019-472	4700PF	CERAMIC
C001	QCZ9019-472	4700PF	CERAMIC
C001	QCZ9019-472	4700PF	CERAMIC
C001	QCZ9019-472	4700PF	CERAMIC
C001	QCZ9019-472BS	4700PF	CERAMIC
C101	QCF21HP-473	0.047MF	50V CERAMIC
C103	QETB1HM-225	2.2MF	50V ELECTRO
C151	QETB1HM-105	1MF	50V ELECTRO
C181	QCF21HP-103	0.01MF	50V CERAMIC
C201	QCF21HP-223	0.022MF	50V CERAMIC
C202	QCF21HP-103	0.01MF	50V CERAMIC
C203	QCB1HK-101	100PF	50V CERAMIC
C204	QCB1HK-101	100PF	50V CERAMIC
C205	QCB1HK-101	100PF	50V CERAMIC
C206	QCB1HK-101	100PF	50V CERAMIC
C207	QCB1HK-101	100PF	50V CERAMIC
C208	QCB1HK-101	100PF	50V CERAMIC
C209	QCB1HK-101	100PF	50V CERAMIC
C210	QCB1HK-101	100PF	50V CERAMIC
C211	QCB1HK-101	100PF	50V CERAMIC
C212	QCB1HK-101	100PF	50V CERAMIC
C213	QCB1HK-101	100PF	50V CERAMIC
C214	QCB1HK-101	100PF	50V CERAMIC
C215	QCB1HK-101	100PF	50V CERAMIC
C216	QCB1HK-101	100PF	50V CERAMIC
C217	QCB1HK-101	100PF	50V CERAMIC
C218	QCB1HK-101	100PF	50V CERAMIC
C219	QCB1HK-101	100PF	50V CERAMIC
C220	QCB1HK-101	100PF	50V CERAMIC
C221	QCB1HK-101	100PF	50V CERAMIC
C222	QCB1HK-101	100PF	50V CERAMIC
C230	QCB1HK-561	560PF	50V CERAMIC
C301	QETB1HM-475	4.7MF	50V ELECTRO
C302	QETB1HM-475	4.7MF	50V ELECTRO
C305	QCY21HK-182	1800PF	50V CERAMIC
C306	QCY21HK-182	1800PF	50V CERAMIC
C307	QCY21HK-682	6800PF	50V CERAMIC
C308	QCY21HK-682	6800PF	50V CERAMIC
C309	QCB1HK-101	100PF	50V CERAMIC
C310	QCB1HK-101	100PF	50V CERAMIC
C311	QETB1HM-475	4.7MF	50V ELECTRO
C312	QETB1HM-475	4.7MF	50V ELECTRO
C313	QETB1HM-476	47MF	50V ELECTRO
C314	QETB1HM-476	47MF	50V ELECTRO
C401	QETB1HM-474	0.47MF	50V ELECTRO
C402	QETB1HM-474	0.47MF	50V ELECTRO
C405	QFN81HK-182	1800PF	50V MYLAR
C406	QFN81HK-182	1800PF	50V MYLAR
C407	QFN81HK-104	0.1MF	50V MYLAR
C408	QFN81HK-104	0.1MF	50V MYLAR
C409	QETB1HM-475	4.7MF	50V ELECTRO
C410	QETB1HM-475	4.7MF	50V ELECTRO
C421	QCF21HP-473	0.047MF	50V CERAMIC
C422	QETB1AM-107	100MF	10V ELECTRO
C423	QETB1HM-225	2.2MF	50V ELECTRO
C424	QETB1HM-225	2.2MF	50V ELECTRO
C425	QETB1EM-106	10MF	25V ELECTRO
C427	QCS21HJ-121	120PF	50V CERAMIC
C428	QCS21HJ-121	120PF	50V CERAMIC
C501	QFN81HK-153	0.015MF	50V MYLAR
C502	QFN81HK-153	0.015MF	50V MYLAR
C503	QFN81HK-823	0.082MF	50V MYLAR
C504	QFN81HK-823	0.082MF	50V MYLAR
C505	QEH1HM-225	2.2MF	50V ELECTRO
C506	QEH1HM-225	2.2MF	50V ELECTRO
C507	QETB1HM-105	1MF	50V ELECTRO
C508	QETB1HM-105	1MF	50V ELECTRO
C511	QFN81HK-332	3300PF	50V MYLAR
C512	QFN81HK-332	3300PF	50V MYLAR
C515	QFN81HK-183	0.018MF	50V MYLAR
C516	QFN81HK-183	0.018MF	50V MYLAR
C517	QCS21HJ-221	220PF	50V CERAMIC
C518	QCS21HJ-221	220PF	50V CERAMIC
C519	QCY21HK-122	1200PF	50V CERAMIC
C520	QCY21HK-122	1200PF	50V CERAMIC
C551	QETB1HM-106	10MF	50V ELECTRO
C701	EEZ42AM-106	10MF	100V ELECTRO
C702	EEZ42AM-106	10MF	100V ELECTRO
C703	QFP81HG-241	240PF	50V P.P.
C704	QFP81HG-241	240PF	50V P.P.
C705	QCSB1HJ-680	68PF	50V CERAMIC
C706	QCSB1HJ-680	68PF	50V CERAMIC
C707	QETB1CM-107	100MF	16V ELECTRO
C708	QETB1CM-107	100MF	16V ELECTRO
C709	QCSB1HJ-3R9	3.9PF	50V CERAMIC

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION			AREA
C710	QCSB1HJ-3R9	3.9PF	50V	CERAMIC	
C711	QEH1HM-225	2.2MF	50V	ELECTRO	
C712	QEH1HM-225	2.2MF	50V	ELECTRO	
C715	QETB1JM-107	100MF	63V	ELECTRO	
C717	QFN81HK-104	0.1MF	50V	MYLAR	CBS
C717	QFN81HK-104	0.1MF	50V	MYLAR	D
C717	QFN81HK-104	0.1MF	50V	MYLAR	E
C717	QFN81HK-473	0.047MF	50V	MYLAR	A
C717	QFN81HK-473	0.047MF	50V	MYLAR	B
C718	QFN81HK-104	0.1MF	50V	MYLAR	CBS
C718	QFN81HK-104	0.1MF	50V	MYLAR	D
C718	QFN81HK-104	0.1MF	50V	MYLAR	E
C718	QFN81HK-473	0.047MF	50V	MYLAR	A
C718	QFN81HK-473	0.047MF	50V	MYLAR	B
C719	QFN81HK-104	0.1MF	50V	MYLAR	CBS
C719	QFN81HK-104	0.1MF	50V	MYLAR	D
C719	QFN81HK-104	0.1MF	50V	MYLAR	E
C720	QFN81HK-104	0.1MF	50V	MYLAR	CBS
C720	QFN81HK-104	0.1MF	50V	MYLAR	D
C720	QFN81HK-104	0.1MF	50V	MYLAR	E
C721	QFN81HK-103	0.01MF	50V	MYLAR	
C722	QFN81HK-103	0.01MF	50V	MYLAR	
C723	QCHB1EZ-223	0.022MF	25V	CERAMIC	
C724	QCHB1EZ-223	0.022MF	25V	CERAMIC	
C727	QFP81HG-241	240PF	50V	P.P.	
C728	QFP81HG-241	240PF	50V	P.P.	
C800	QCF21HP-103	0.01MF	50V	CERAMIC	
C801	QE20075-878N	8700MF	56V	ELECTRO	
C802	QE20075-878N	8700MF	56V	ELECTRO	
C805	QETB1EM-476	47MF	25V	ELECTRO	
C806	QETB1EM-476	47MF	25V	ELECTRO	
C807	QETB1EM-476	47MF	25V	ELECTRO	
C808	QETB1EM-476	47MF	25V	ELECTRO	
C809	QETB1EM-476	47MF	25V	ELECTRO	
C810	QETB1EM-476	47MF	25V	ELECTRO	
C811	QETB1EM-476	47MF	25V	ELECTRO	
C812	QETB1EM-476	47MF	25V	ELECTRO	
C813	QETB1EM-476	47MF	25V	ELECTRO	
C818	QCS21HJ-101	100PF	50V	CERAMIC	
C831	QETB1CM-107	100MF	16V	ELECTRO	
C832	QETB1CM-107	100MF	16V	ELECTRO	
C901	QETB1AM-227	220MF	10V	ELECTRO	
C902	QEH1HM-475	4.7MF	50V	ELECTRO	
C903	QETB1EM-226	22MF	25V	ELECTRO	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R101	QRD167J-222	2.2K	1/6W	CARBON	
R102	QRD167J-561	560	1/6W	CARBON	
R103	QRD167J-103	10K	1/6W	CARBON	
R104	QRD167J-561	560	1/6W	CARBON	
R105	QRD167J-103	10K	1/6W	CARBON	
R106	QRD167J-272	2.7K	1/6W	CARBON	
R107	QRD167J-103	10K	1/6W	CARBON	
R108	QRD167J-473	47K	1/6W	CARBON	
R109	QRD167J-103	10K	1/6W	CARBON	
R111	QRD167J-271	270	1/6W	CARBON	
R112	QRD167J-271	270	1/6W	CARBON	
R113	QRD167J-271	270	1/6W	CARBON	
R114	QRD167J-271	270	1/6W	CARBON	
R115	QRD167J-271	270	1/6W	CARBON	
R116	QRD167J-271	270	1/6W	CARBON	
R151	QRD167J-152	1.5K	1/6W	CARBON	
R152	QRD167J-682	6.8K	1/6W	CARBON	
R153	QRD167J-152	1.5K	1/6W	CARBON	
R154	QRD167J-682	6.8K	1/6W	CARBON	
R155	QRD167J-103	10K	1/6W	CARBON	
R156	QRD167J-472	4.7K	1/6W	CARBON	
R181	QRD167J-103	10K	1/6W	CARBON	
R182	QRD167J-103	10K	1/6W	CARBON	
R183	QRD167J-221	220	1/6W	CARBON	
R184	QRD167J-223	22K	1/6W	CARBON	
R186	QRD167J-473	47K	1/6W	CARBON	
R201	QRD167J-102	1K	1/6W	CARBON	
R202	QRD167J-102	1K	1/6W	CARBON	
R203	QRD167J-102	1K	1/6W	CARBON	
R204	QRD167J-102	1K	1/6W	CARBON	
R205	QRD167J-102	1K	1/6W	CARBON	
R206	QRD167J-102	1K	1/6W	CARBON	
R207	QRD167J-221	220	1/6W	CARBON	
R208	QRD167J-221	220	1/6W	CARBON	
R209	QRD167J-221	220	1/6W	CARBON	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R210	QRD167J-221	220	1/6W	CARBON	
R211	QRD167J-221	220	1/6W	CARBON	
R212	QRD167J-221	220	1/6W	CARBON	
R213	QRD167J-102	1K	1/6W	CARBON	
R214	QRD167J-102	1K	1/6W	CARBON	
R215	QRD167J-102	1K	1/6W	CARBON	
R216	QRD167J-102	1K	1/6W	CARBON	
R221	QRD167J-221	220	1/6W	CARBON	
R222	QRD167J-221	220	1/6W	CARBON	
R223	QRD167J-103	10K	1/6W	CARBON	
R224	QRD167J-103	10K	1/6W	CARBON	
R227	QRD167J-103	10K	1/6W	CARBON	
R228	QRD167J-103	10K	1/6W	CARBON	
R229	QRD167J-913	91K	1/6W	CARBON	
R230	QRD167J-913	91K	1/6W	CARBON	
R301	QRD167J-222	2.2K	1/6W	CARBON	
R302	QRD167J-222	2.2K	1/6W	CARBON	
R303	QRD167J-473	47K	1/6W	CARBON	
R304	QRD167J-473	47K	1/6W	CARBON	
R305	QRD167J-911	910	1/6W	CARBON	
R306	QRD167J-911	910	1/6W	CARBON	
R307	QRD167J-393	39K	1/6W	CARBON	
R308	QRD167J-393	39K	1/6W	CARBON	
R309	QRD167J-474	470K	1/6W	CARBON	
R310	QRD167J-474	470K	1/6W	CARBON	
R311	QRD167J-104	100K	1/6W	CARBON	
R312	QRD167J-104	100K	1/6W	CARBON	
R400	QVDA96W-EF5B	250K		VARIABLE	
R401	QRD167J-474	470K	1/6W	CARBON	
R402	QRD167J-474	470K	1/6W	CARBON	
R403	QRD167J-223	22K	1/6W	CARBON	
R404	QRD167J-223	22K	1/6W	CARBON	
R405	QRD167J-223	22K	1/6W	CARBON	
R406	QRD167J-223	22K	1/6W	CARBON	
R407	QRD167J-223	22K	1/6W	CARBON	
R408	QRD167J-223	22K	1/6W	CARBON	
R409	QRD167J-223	22K	1/6W	CARBON	
R410	QRD167J-223	22K	1/6W	CARBON	
R411	QRD167J-223	22K	1/6W	CARBON	
R412	QRD167J-223	22K	1/6W	CARBON	
R420	QVDB96C-E15C	100K		VARIABLE	
R421	QRD167J-822	8.2K	1/6W	CARBON	
R422	QRD167J-822	8.2K	1/6W	CARBON	
R423	QRD167J-224	220K	1/6W	CARBON	
R424	QRD167J-224	220K	1/6W	CARBON	
R501	QVDB96C-E15B	100K		VARIABLE	
R503	QRD167J-203	20K	1/6W	CARBON	
R504	QRD167J-203	20K	1/6W	CARBON	
R505	QRD167J-362	3.6K	1/6W	CARBON	
R506	QRD167J-362	3.6K	1/6W	CARBON	
R511	QVDB96C-E15B	100K		VARIABLE	
R513	QRD167J-472	4.7K	1/6W	CARBON	
R514	QRD167J-472	4.7K	1/6W	CARBON	
R515	QRD167J-821	820	1/6W	CARBON	
R516	QRD167J-821	820	1/6W	CARBON	
R517	QRD167J-681	680	1/6W	CARBON	
R518	QRD167J-681	680	1/6W	CARBON	
R551	QVDA96B-EF5B	250K		VARIABLE	
R553	QRD167J-563	56K	1/6W	CARBON	
R554	QRD167J-563	56K	1/6W	CARBON	
R701	QRD167J-222	2.2K	1/6W	CARBON	
R702	QRD167J-222	2.2K	1/6W	CARBON	
R703	QRD167J-104	100K	1/6W	CARBON	
R704	QRD167J-104	100K	1/6W	CARBON	
R705	QRD167J-511	510	1/6W	CARBON	
R706	QRD167J-511	510	1/6W	CARBON	
R707	QRD167J-133	13K	1/6W	CARBON	
R708	QRD167J-133	13K	1/6W	CARBON	
R709	QRD167J-823	82K	1/6W	CARBON	
R710	QRD167J-823	82K	1/6W	CARBON	
R711	QRD167J-103	10K	1/6W	CARBON	
R712	QRD167J-103	10K	1/6W	CARBON	
R713	QRD167J-162	1.6K	1/6W	CARBON	
R714	QRD167J-162	1.6K	1/6W	CARBON	
R715	QRD167J-103	10K	1/6W	CARBON	
R716	QRD167J-103	10K	1/6W	CARBON	
R717	QRD167J-162	1.6K	1/6W	CARBON	
R718	QRD167J-162	1.6K	1/6W	CARBON	
R719	QRX022J-R22AM	0.22	2W	M.FILM	
R720	QRX022J-R22AM	0.22	2W	M.FILM	
R725	QRZ0077-100	10	1/4W	FUSIBLE	
R726	QRZ0077-101	100	1/4W	FUSIBLE	
R727	QRD167J-104	100K	1/6W	CARBON	
R728	QRD167J-104	100K	1/6W	CARBON	
R729	QRD14CJ-100S	10	1/4W	UNF. CARBON	
R730	QRD14CJ-100S	10	1/4W	UNF. CARBON	
R731	QRG012J-100AM	10	1W	O.M. FILM	
R732	QRG012J-100AM	10	1W	O.M. FILM	
R751	QRG032J-180A	18	3W	O.M. FILM	

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
△	R753	QRG022J-331AM	330	2W	O.M.FILM	
△	R754	QRG022J-331AM	330	2W	O.M.FILM	
△	R801	QRZ0077-100	10	1/4W	FUSIBLE	
△	R802	QRZ0077-100	10	1/4W	FUSIBLE	
△	R803	QRD167J-153	15K	1/6W	CARBON	
△	R804	QRD167J-153	15K	1/6W	CARBON	
△	R805	QRD167J-153	15K	1/6W	CARBON	
△	R806	QRD167J-153	15K	1/6W	CARBON	
△	R807	QRZ0077-4R7	4.7	1/4W	FUSIBLE	
△	R809	QRD167J-183	18K	1/6W	CARBON	
△	R810	QRD167J-682	6.8K	1/6W	CARBON	
△	R811	QRD167J-183	18K	1/6W	CARBON	
△	R812	QRD167J-682	6.8K	1/6W	CARBON	
△	R813	QRZ0077-100	10	1/4W	FUSIBLE	
△	R817	QRD14CJ-180S	18	1/4W	UNF.CARBON	
△	R818	QRD167J-153	15K	1/6W	CARBON	
△	R819	QRD167J-153	15K	1/6W	CARBON	
△	R820	QRD167J-123	12K	1/6W	CARBON	
△	R831	QRD167J-471	470	1/6W	CARBON	
△	R832	QRD167J-471	470	1/6W	CARBON	
△	R901	QRD167J-333	33K	1/6W	CARBON	
△	R903	QRD167J-163	16K	1/6W	CARBON	
△	R905	QRD167J-562	5.6K	1/6W	CARBON	
△	R906	QRD167J-104	100K	1/6W	CARBON	
△	R907	QRD167J-823	82K	1/6W	CARBON	
△	R908	QRD167J-512	5.1K	1/6W	CARBON	
△	R909	QRD167J-224	220K	1/6W	CARBON	
△	R912	QRD167J-333	33K	1/6W	CARBON	
△	R913	QRD167J-333	33K	1/6W	CARBON	
△	R916	QRD167J-103	10K	1/6W	CARBON	
△	R917	QRD167J-562	5.6K	1/6W	CARBON	
△	R921	QRD167J-431	430	1/6W	CARBON	
△	R922	QRD167J-431	430	1/6W	CARBON	
△	R923	QRD167J-431	430	1/6W	CARBON	
△	R924	QRD167J-431	430	1/6W	CARBON	
△	R925	QRD167J-431	430	1/6W	CARBON	
△	R926	QRD167J-431	430	1/6W	CARBON	
△	R927	QRD167J-431	430	1/6W	CARBON	
△	R928	QRD167J-431	430	1/6W	CARBON	
△	RA101	QRB069J-103	10K	1/10W	R.NETWORK	

△ : SAFETY PARTS

OTHERS

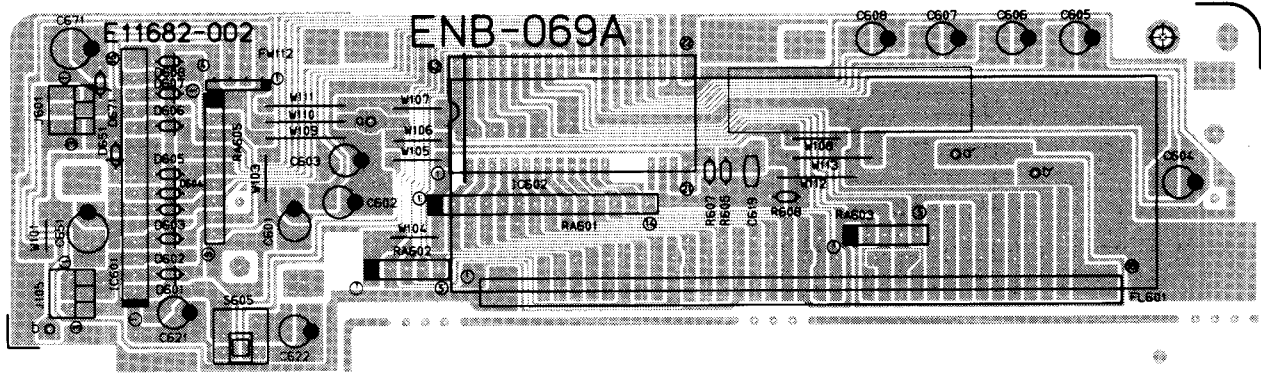
△	ITEM	PART NUMBER	DESCRIPTION			AREA
	J752	EMN00YV-206A	2P	PIN JACK		
	J801	E67764-103	WRAPPING	TERMINAL		
	J801	QMA1221-009	DC	JACK		
△	S001	QSP1106-004	POWER	SWITCH		A
△	S001	QSP1106-004	POWER	SWITCH		B
△	S001	QSP1106-004	POWER	SWITCH		D
△	S001	QSP1106-004	POWER	SWITCH		E
△	S001	QSP1106-004BS	POWER	SWITCH		CBS
	S111	ESP0001-018	TACT	SWITCH		
	S112	ESP0001-018	TACT	SWITCH		
	S113	ESP0001-018	TACT	SWITCH		
	S114	ESP0001-018	TACT	SWITCH		
	S115	ESP0001-018	TACT	SWITCH		
	S116	ESP0001-018	TACT	SWITCH		
	S401	QST4102-E07	PUSH	SWITCH		
	CX101	ECX0004-194KM	RESONATOR			
	FW102	EWR35B-25LST	FLAT	WIRE		
	FW103	EWR23C-30LN	FLAT	WIRE		
	FW104	EWR23C-25NN	FLAT	WIRE		
	FW105	EWR33B-20KST	FLAT	WIRE		
	FW106	EWR39B-30SST	FLAT	WIRE		
	FW107	EWR34B-25SST	FLAT	WIRE		
	FW108	EWR37B-25LST	FLAT	WIRE		
	FW109	EWR36B-25LST	FLAT	WIRE		
	FW110	EWR34B-16LST	FLAT	WIRE		
	FW111	EWR34B-35LST	FLAT	WIRE		
	JT101	EMV7122-003Z	CONNECTOR			
	JT102	EMV7122-004Z	CONNECTOR			
	JT103	EMV7122-003Z	CONNECTOR			
	JT104	EMV7122-003Z	CONNECTOR			
	RY901	ESK5D24-218	RELAY			
	FW202	EWR23C-25LN	FLAT	WIRE		

△ : SAFETY PARTS

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
		EMG7331-001	FUSE	CLIP		B
		EMG7331-001	FUSE	CLIP		CBS
		EMG7331-001	FUSE	CLIP		D
		EMG7331-001	FUSE	CLIP		E
		E11681-003	PC	BOARD		A
		E11681-003	PC	BOARD		B
		E11681-003	PC	BOARD		D
		E11681-003	PC	BOARD		E
		E11681-003BS	PC	BOARD		CBS
		E65508-002	TAB			B
		E65508-002	TAB			CBS
		E65508-002	TAB			D
		E65508-002	TAB			E
		E67132-T1R6	FUSE	LABEL		B
		E67132-T1R6	FUSE	LABEL		CBS
		E67132-T1R6	FUSE	LABEL		D
		E67132-T1R6	FUSE	LABEL		E
		E67764-203	WRAPPING	TERMINAL		B
		E67764-203	WRAPPING	TERMINAL		CBS
		E67764-203	WRAPPING	TERMINAL		D
		E67764-203	WRAPPING	TERMINAL		E
		E70945-H25	HEAT-SINK			
		E70945-H35	HEAT-SINK			
		E70945-H35	HEAT-SINK			
		SBSB3008CC	SCREW			
		SBSB3008CC	SCREW			
		SBSB3008CC	SCREW			
	J101	EMV5103-002A	PLUG	ASSY		
	J102	EMV7122-005Z	CONNECTOR			
	J103	EMV7122-003Z	CONNECTOR			
	J110	EMV7122-004Z	CONNECTOR			
	J111	EMV7122-004Z	CONNECTOR			
	J112	EMV7122-004Z	CONNECTOR			
	J181	QMS3533-001	MINI	JACK		
	J201	EMN00TV-402A	4P	PIN JACK		
	J202	EMN00TV-402A	4P	PIN JACK		
	J203	EMN00TV-602A	6P	PIN JACK		
	J204	EMN00TV-602A	6P	PIN JACK		
	J702	EMB90YV-401A	SPEAKER	TERMINAL		
	J751	QMS6312-023	HEADPHONE	JACK		

■ ENB-069A FL Display PC Board Ass'y



I. C. S

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
IC601	7EL-SPI-001	I.C.	KYOSERA
IC602	LC7566	I.C.	SANYO

RESISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
R605	QRD167J-183	18K 1/6W CARBON	
R607	QRD167J-474	470K 1/6W CARBON	
R608	QRD167J-474	470K 1/6W CARBON	
RA601	QRB135J-104	100K 1/8W R.NETWORK	
RA602	QRB045J-104	100K 1/8W R.NETWORK	
RA603	QRB045J-104	100K 1/8W R.NETWORK	
RA605	QRB085J-473	47K 1/8W R.NETWORK	

DIODES

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
D601	MA700A	ZENER	MATSUSHITA
D602	1SS133	SILICON	ROHM
D603	1SS133	SILICON	ROHM
D604	1SS133	SILICON	ROHM
D605	1SS133	SILICON	ROHM
D606	1SS133	SILICON	ROHM
D607	1SS133	SILICON	ROHM
D608	1SS133	SILICON	ROHM
D651	1SS133	SILICON	ROHM
D671	MTZ7.5JC	ZENER	ROHM

OTHERS

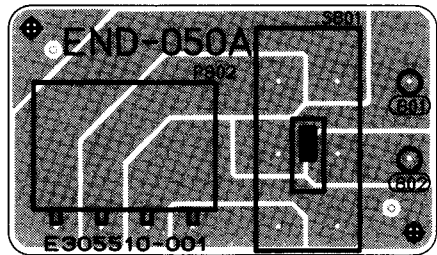
ITEM	PART NUMBER	DESCRIPTION	AREA
	E11682-002	PC BOARD	
J105	EMV7122-003Z	CONNECTOR	
J601	EMV7122-003Z	CONNECTOR	
S605	QSP2256-001	PUSH SWITCH	
FL601	ELU0001-047	FL TUBE	
FS601	E3400-387	FELT SPACER	
FW112	EWR348-30LST	FLAT WIRE	

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C601	QER61EM-475G	4.7MF 25V ELECTRO	
C602	QER61EM-475G	4.7MF 25V ELECTRO	
C603	QER61EM-475G	4.7MF 25V ELECTRO	
C604	QER61EM-475G	4.7MF 25V ELECTRO	
C605	QER61EM-475G	4.7MF 25V ELECTRO	
C606	QER61EM-475G	4.7MF 25V ELECTRO	
C607	QER61EM-475G	4.7MF 25V ELECTRO	
C608	QER61EM-475G	4.7MF 25V ELECTRO	
C619	QCXB1CM-152	1500PF 16V CERAMIC	
C621	QETB1HM-475	4.7MF 50V ELECTRO	
C622	QETB1HM-475	4.7MF 50V ELECTRO	
C651	QETB1AM-107	100MF 10V ELECTRO	
C671	QETB1EM-476	47MF 25V ELECTRO	

■ END-050A Impedance Selector PC Board Ass'y

(for Europe, Australia, West Germany, U.K.)

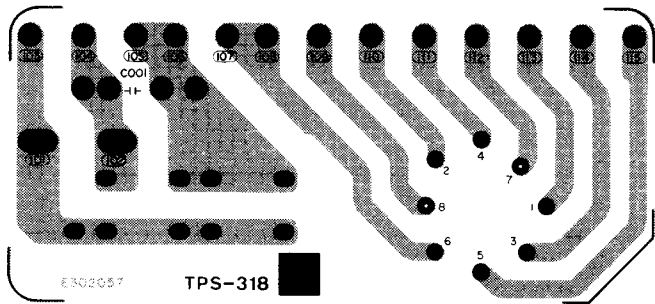


OTHERS

ITEM	PART NUMBER	DESCRIPTION	AREA
P802	E305510-001	PC BOARD	
S801	EMV5102-004B	PLUG ASSY	
	QSS5C22-E03	SLIDE SWITCH	

■ TPS-318 Voltage Selector PC Board Ass'y

(Except for Europe, Australia, West Germany, U.K.)



CAPACITORS

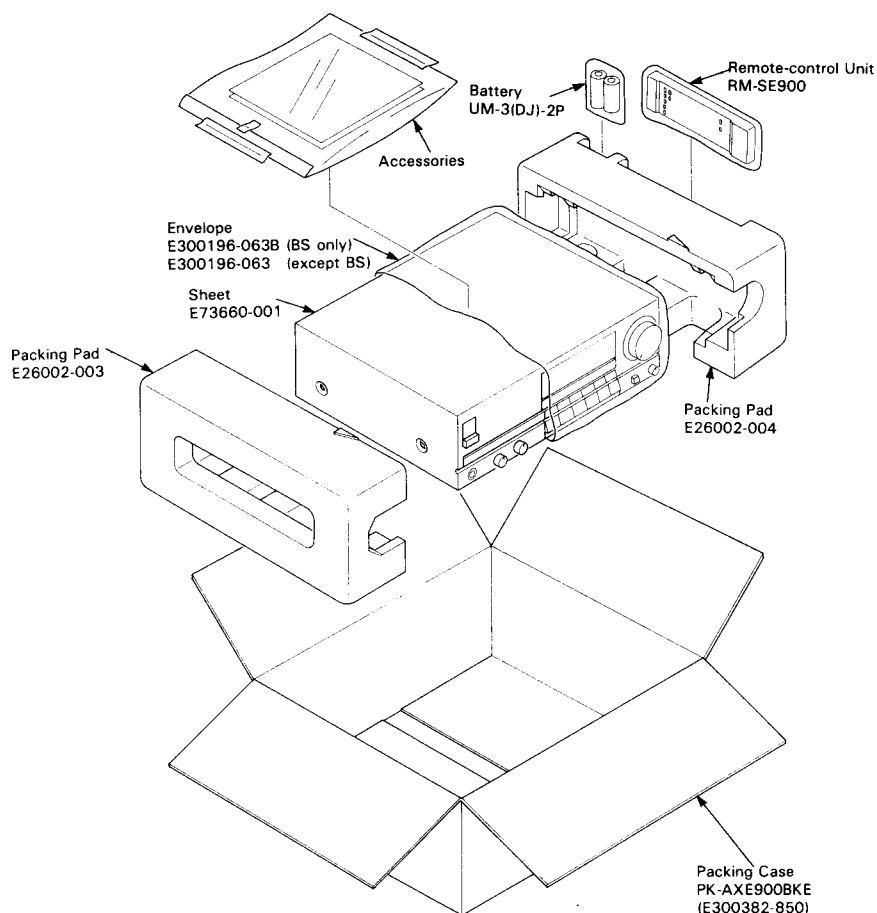
ITEM	PART NUMBER	DESCRIPTION	AREA
C001	QCZ9038-103	0.01MF	CERAMIC

OTHERS

ITEM	PART NUMBER	DESCRIPTION	AREA
	E302057-002	PC BOARD	
	E65508-002	TAB	
	E67764-302	WRAPPING TERMINAL	
	E67764-303	WRAPPING TERMINAL	
	E67764-304	WRAPPING TERMINAL	
	QMC0637-004	AC OUTLET	
	QSR0085-008U	VOLTAGE SELECTOR	

△ : SAFETY PARTS

Packing Materials and Part Numbers



Accessories List

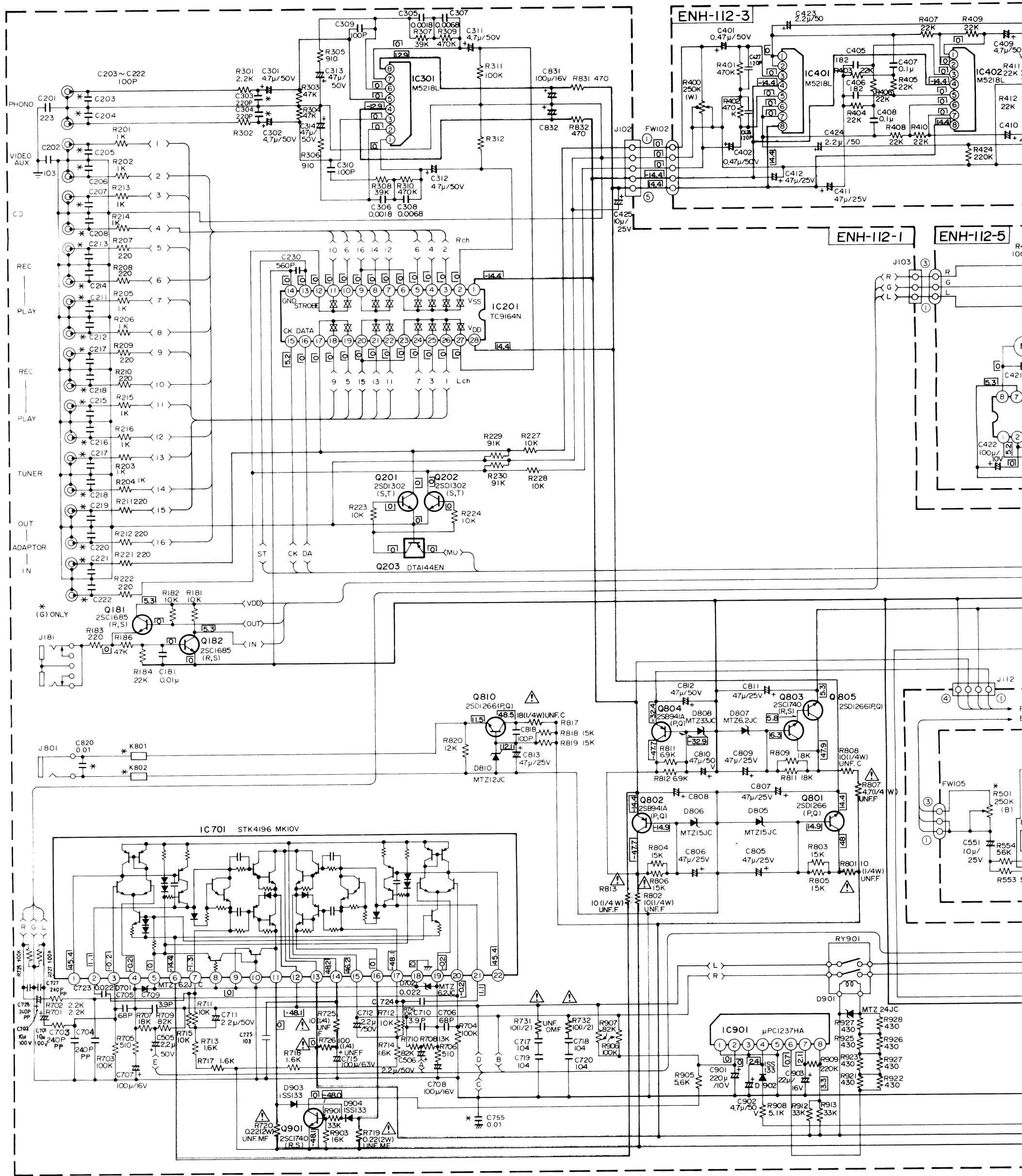
△	Parts Number	Parts Name	Description	Areas
	E30580-1466A E30580-1466ABS E43486-340A BT20029C BT20064A	Instruction Book Instruction Book Safety Sheet Warranty Card Warranty Card	includes the Instruction Book.	except for BS BS only BS only A G
	QZL1008-001 BT20060 BT20066 BT20048B BT20046C	Information Sheet Warranty Card EEC Agency Warranty Card Service Information		G BS G, BS P, PG P, PG
△	E04056 E300196-033 E300196-033B	Siemens Plug Envelope Envelope	for the Inst.Book, W.Card, etc.	U, PG except for BS BS only
△	QMF51A2-3R15S QMF51A2-1R6S E67142-T3R15 E67142-T1R6 E6581-4	Fuse Fuse Fuse Label Fuse Label Envelope	T3.15A / 250V T1.6A / 250V T3.15A T1.6A for the Fuse	U, PG P U, PG P U, P, PG

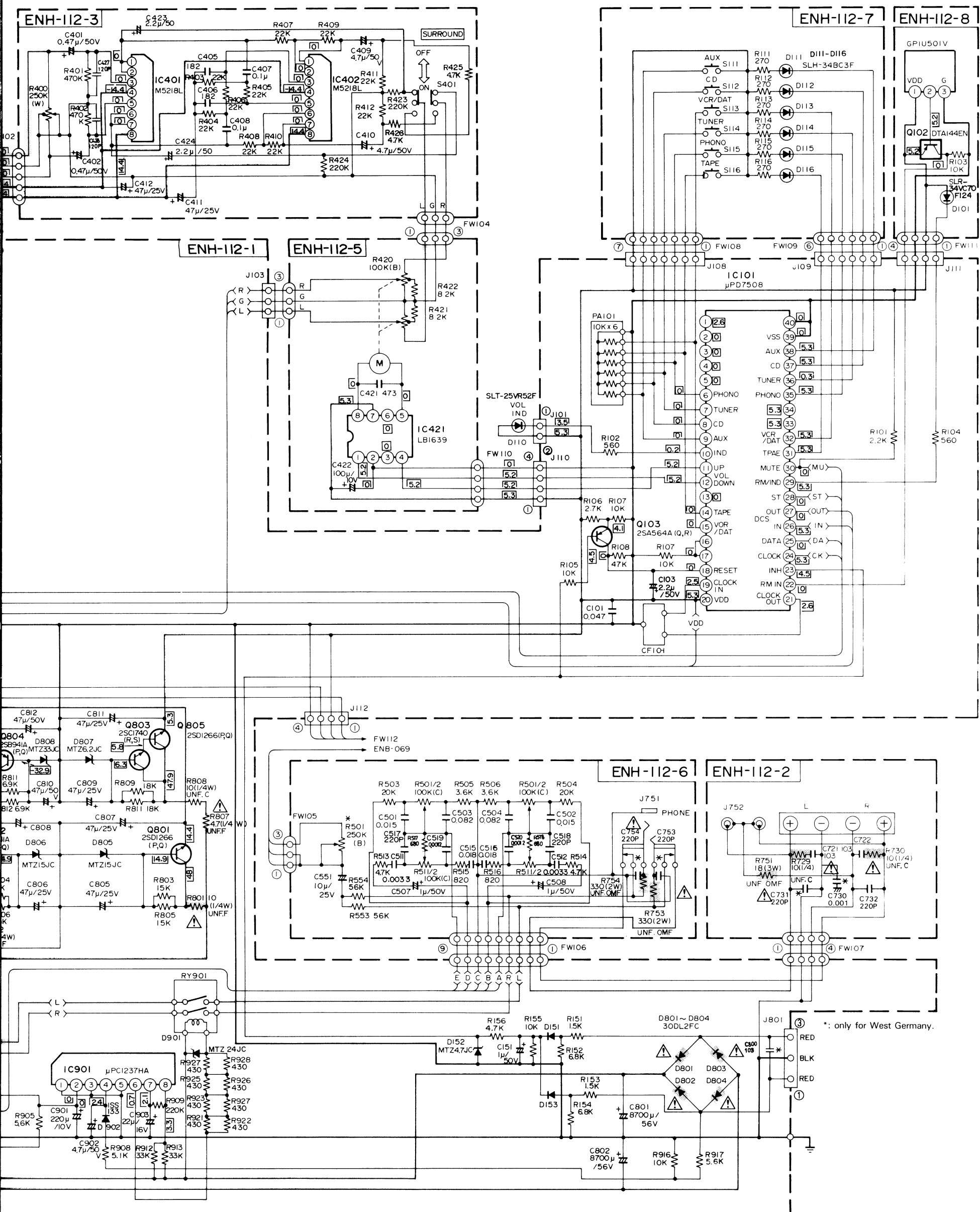
Note: The Marks for Designated Areas

E Europe P, PG U.S.Military Market
A Australia U Other Countries
G West Germany No Mark indicates all areas.
BS U.K.

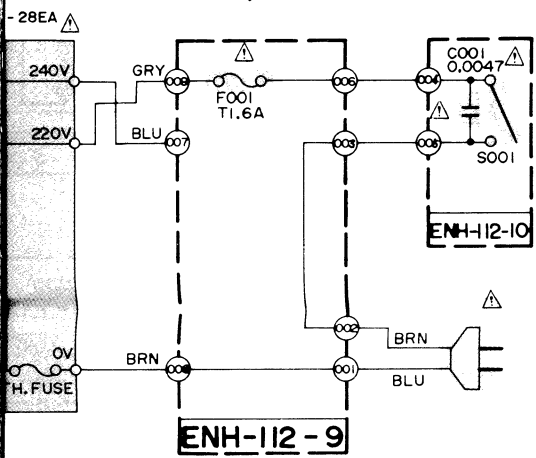
△:Safety Parts

Schematic Diagram

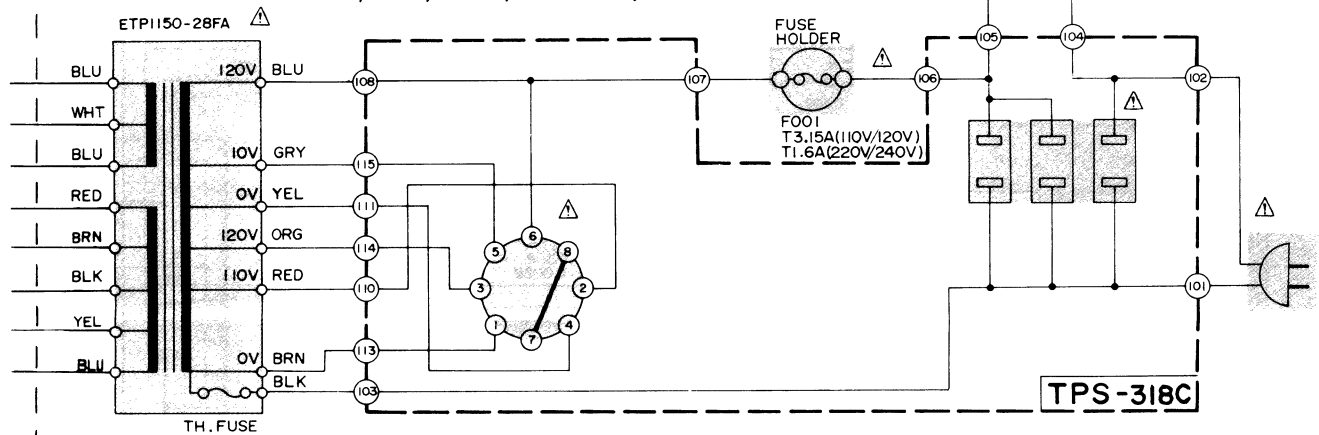




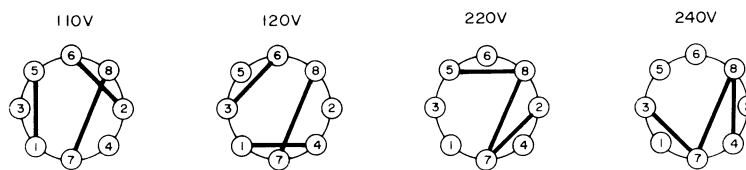
(E),(EF) FOR CONTINENTAL EUROPE
(G) FOR WEST GERMANY
AC220V~, 50Hz



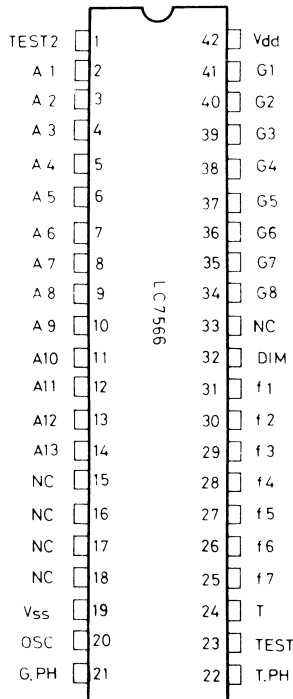
U, P & PG (U) FOR OTHER COUNTRIES
(P),(PG) FOR PACEX
AC110V, 120V, 220V, 240V~, 50Hz / 60Hz



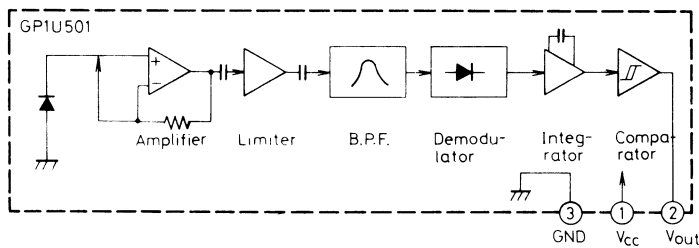
VOLTAGE SELECTOR CONNECTION



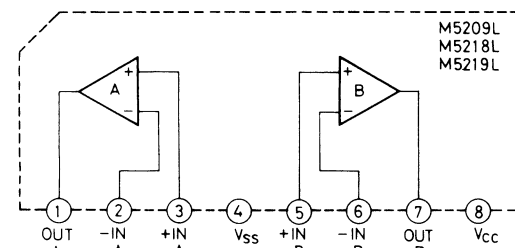
■ LC7566 (IC602)



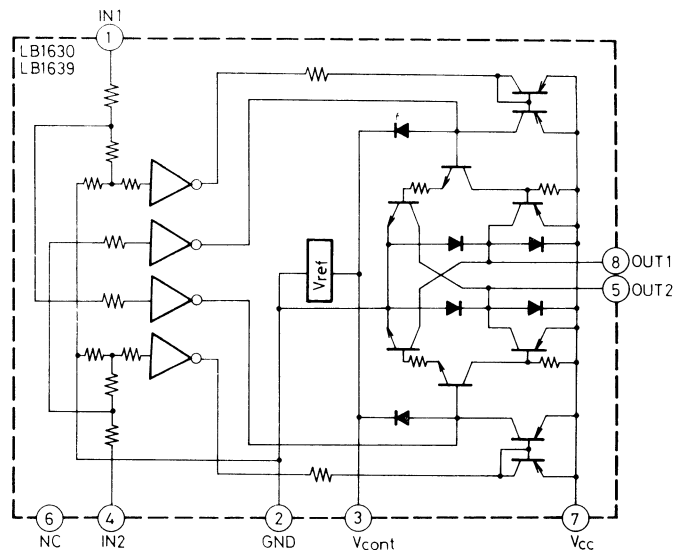
■ GP1U501V (IC102)



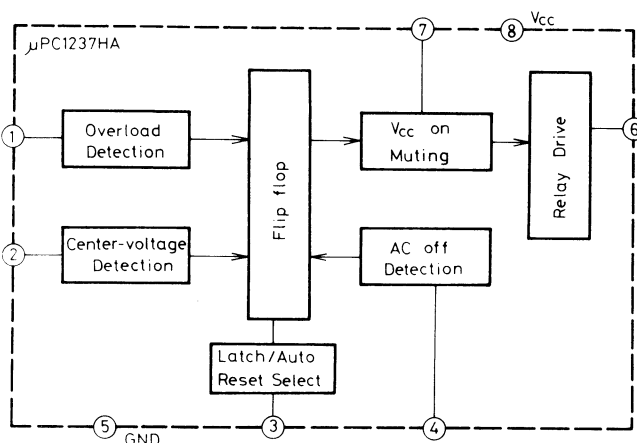
■ M5218L (IC301, IC401, IC402)



■ LB1639 (IC421)



■ μPC1237HA (IC901)



■ LC7566 (IC602)

